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AND EGYPTIAN RESEARCH ACCOUNT
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ERRATA

- p. 8, col. ii, 10 up, *for vxii read xvii*
 p. 11, ,, i, 20 down, *for corners, read courses*
 p. 21, ,, ii, 16 up, *for retores, read restore*
 p. 24, ,, i, 9 up, *for 40-70, read 37-71*

LAHUN II.

THE PYRAMID AND THE CEMETERY.

INTRODUCTION.

1. THE work of the British School at Lahun, called by older writers Illahun or El Lahun, occupied three seasons, in 1914, 1920, and 1921. The results are described in this volume, in addition to those published on the princesses' tombs and jewellery in *Lahun I The Treasure*, with the names of those who were engaged the first season. In 1920 the workers were the Director and Mrs. Flinders Petrie, Mr. and Mrs. Guy Brunton, Capt. Engelbach, Mr. Jefferies, with help from Mr. Miller and Miss Hughes. In 1921 the Lahun work was entirely in the hands of Mr. and Mrs. Brunton assisted by Mr. West, while the chief camp was at Sedment. The different years of work are united in the order of description, with which the order of the plates agrees so far as practicable.

2. The general disposition of the site is given in pl. ii. The desert is highest on the north-west and slopes down to the cultivation on the south-east. The essential axis of the place is the approach to the pyramid from the valley temple, three quarters of a mile to the east. This line runs over a group of deep rock-cut tomb pits (pl. xi) apparently of the XIIth dynasty; yet without any clear line left for the roadway. Such ignoring of the road is also seen in the disposal of the line of trees on the east of the pyramid, pl. viii, which have no gap for the line of road from the causeway to the temple. It is evident from these features that the axis was solely spiritual as a direction of worship of the king, and was not physically processional. Between the rock tombs and the valley temple there is a great number of sur-

face graves in the yellow marl, probably of the XVIIIth dynasty, now entirely robbed. The approach to the valley temple runs up the hill from the cultivation (see pl. xxxiii). North of the temple is the town of the pyramid workmen. When I first discovered the town in 1887, I asked an old man whom I met, what the name of it was, and he replied at once "Kahun," and so it has been since called. How old the name may be is not known. The plan of the 2145 rooms is given in *Illahun*, 1891, pl. xiv. On the north-west, left edge of plate ii, is the Table Hill, a flat-topped block of the limestone strata, denuded away on all sides. A tomb pit has been cut in the top of it. Another block of limestone is conspicuous by having cut in the face of it, a square chamber in which is a tomb well.

Half a mile to the south of the pyramid, near the edge of the cultivation is a mound of brown mud, an isolated block of a high-level Nile mud stratum, which appears capped by gravel to the west of this. It belongs to the period of an earlier high Nile, long before historic times. On the level surface of this mud, west of the mound, lay a large number of flints of late Mousterian age, evidently remains of a settlement (pls. xxxvii-xxxix). To the north-east of the mound is an area of granite working, covered with red granite chips and dust and black quartzose hammer stones. Further west is a hill riddled with tomb-pits of a cemetery, (the "dyke cemetery") probably of the XIIth dynasty; on the west side of it we found some tombs of the IInd dynasty, and on the east side I had previously found the coffin representing Amenardas in ribbed white dress (Cairo Museum). An iso-

lated hill further west has several tomb pits of the XIIth dynasty (pl. xiii), the most important of which is the great tomb of the chief architect Anpy, or Anupy as he was doubtless called (pls. xxvii to xxxi). At the farthest point to the south-west is a hill covered with tomb-pits, which extend eastward into the plain. These are mostly of the Ist dynasty, continuing to the IIIrd, and a few of late period, (see pls. xl-xlvi). As this is close to the station of Bashkatib on the Fayum light railway, the cemetery is called after that, to distinguish it from the later cemeteries of the XIIth dynasty and onward. The spots surrounded by small triangles are government survey marks, useful for reference.

The pyramid cemetery, on pl. iii, was obviously the most important. The tombs are larger, and with better mastabas over them, than in other regions around. The pyramid and its enclosures will be described with pl. viii. To the north of the pyramid enclosure is a great foundation of large blocks, surrounded with a brick paving, see pl. xx. From the absence of any tomb pit in, or near this,—from the foundation deposits at the corners, —and from the fragments of diorite statues, and reliefs here,—it seems that this was the *Sedheb* chapel of apotheosis of the king, put on the highest point by the pyramid, as the *Sedheb* chapel of Sonkh-ka-ra is on the top of the hill at Thebes (*Qurneh* p. 4). Tomb 621 is the grand tomb with a long passage, and a granite chamber around the granite sarcophagus (pl. xxii). The group of tombs to the east, 50-59, are deep tomb pits cut in the limestone, of the XIIth dynasty; they had not been used, except perhaps in one instance, and only workmen's rubbish remained in the shafts.

Another group of empty tomb pits (605) lay in the plain SW. of the pyramid. On the western hill, quarries had been cut on a large scale, and filled up with chips from the working; this was also the case on the north of the pyramid immediately outside of the wall. Most of the western, and all of the northern, chips were searched by us, to see if they concealed any tomb. There are also scattered workings for quarry purposes, in the face of the hill, marked Q; these were cleared to see if they were facades of rock tombs. The numbered tombs will be noted with the plans, and fragments from them, on pls. xxxiv-xxxvi, xlvi-l. At the end of the ridge are some mud brick houses of Roman age, and a large rock-cut tomb with loculi (pl. xxxvi A).

CHAPTER I

THE PYRAMID OF SENUSERT II.

By FLINDERS PETRIE.

3. BEFORE describing the dimensions of the pyramid it is best to state the methods of survey. The pyramid casing rested in a rock socket, which rose between 22 and 31 inches around it on all sides; a little of the casing is left on the west, north, and east sides, this shows that the socket was only cut just large enough to hold the casing. Hence the most prominent points of the socket irregularities (pl. ix) best define the size and bearing of the pyramid.

Accordingly cross lines were cut on the rock just outside of the socket, near each corner. The distance of the crosses was measured by an accurate steel tape, each side of the socket having been completely cleared from end to end. A string was then tightly stretched from cross to cross, and offsets measured from that to each change of direction in the socket cutting. The results will be found in pl. ix. The angles of the corners were fixed by general triangulation.

The triangulation of the region was done by setting up station marks of stones, and measuring the angles with a box sextant. As a test a second base was measured, after a chain of seven triangles of about 1000 feet in the side. The result through one series was 9393 inches, through a different series of triangles 9404, and by direct taping 9397. Four government survey marks were included, to serve for connections with the maps. These are shown on our plans by triangles. No compass bearings were used except for very short distances, for underground passages, or azimuths of graves. The brick piles set up for station marks on the sides of Kahun were visible more than a mile away. For stiffening the net work one triangle was arranged just to include the pyramid, so that the points around it did not depend on a chain of triangles. For convenience the axis of coordinates was adopted nearly parallel to the pyramid. On working it out, the mean azimuth of the pyramid sides is at 30' to the axis. Not having a theodolite at the work a tall plumb line was hung up on a still night, and the azimuth of Polaris taken to two lines of the survey; the results agree within 1' of angle. The final results are that the axis of coordinates is 2° 38' E. of true N., and the pyra-

mid mean side $2^{\circ}8'$ E. of true N. Levels were taken with a vertical suspension mirror, which can be read from a fixed support to about 1 in 3000 or 1'.

4. The body of this pyramid differs much in its system from any other (pl. i). For about 40 feet from the base it is cut out of the solid rock, being isolated from the higher rock on the north and west by wide trenching. Thus a natural knoll of rock was rendered more prominent by the cutting. On the north side there are extensive tunnellings cut in the brickwork on the top of the rock, in search of a chamber pit; I cleared and searched these vainly in 1888. There was a drift way cut, perhaps by the pyramid builders to test if good rock could be found for the chamber. It begins at base level on the west side, and runs from T to T. It is entirely in a soft brown marly stuff, quite unfit for good work, sloping slightly upward from the base.

[At the entrance of the driftway are a few rough steps of brick which may be of pyramid age: but they are more likely to have been made on account of the bad foothold which the broken chips would make for the workers at the tunnel. The debris is deep at this point, and clearly stratified. The strata dip down to the entrance to the tunnel, showing that there was a depression here, reaching down to the tunnel mouth. It looks as if the tunnel were made therefore *after* the destruction of the pyramid, the robbers digging into the debris until reaching the rock, and then driving in. The coincidence of the hollow and the entrance can hardly be accidental. G. B.]

Above the natural rock mass the pyramid was of mud brick, with a gridiron of massive walls of limestone in the lower part. These were doubtless to give firm support to the stone casing, and prevent its being shifted by a settlement of the brickwork. These lines of stone work have been much cut away for stone, until the brickwork above was too dangerous to undermine it further. The present ends of the five walls parallel to each face are marked on the plan, with the two thicker diagonal walls. The central axis of the pyramid is within the breadth of both the parallel and diagonal walls. It seems very probable that there was another wall outside of these on each face into which they were bonded, and this was the actual backing of the casing. The diagonal wall at the SE. corner is 647 to 838 inches over the pavement. The brickwork above the stone follows

the lines of the diagonal walls over their full width; and the rest of the brick is filled in to the triangular spaces between these walls (see pl. i). The mass of chips has not been cleared away from the faces of the rock knoll, but only removed by our work along the base lines.

5. The detail of the pyramid base is given on pl. ix. There a true square of 107 metres (4212.7 ins.) is drawn in full line to a scale of 1 : 600. Around that, outside of all, is a zigzag line showing the form of the socket by offsets from the square, to a scale of 1 : 60. Hence this exaggerates the irregularity of form ten times, and so shows it to the eye. Between the square and the irregular socket line is a broken line which may be presumed to show the line of the pyramid base, if it is straight. This line agrees with the fragments of the pyramid casing, shaded on the E., N. and W.; except at the NW. the casing is too far out, suggesting that the base was not straight on the west side. This broken line is defined by the points of the socket side which limit it most closely, and by five of the six pieces of casing which remain.

The size of the pyramid footing at the bottom of the socket is, then, in inches—

	footing	at pavement
N	4217.4	4161.4
E	4230.5	4174.5
S	4224.9	4168.9
W	4225.3	4169.3
		4168.5 $\pm$ 1.9

The footing is on an average 25.8 inches below pavement level; and on a slope of $42^{\circ}37'$ this would shorten the side 56.0 inches from the footing up to the pavement. This length, at the pavement, of 4168.5 is 200 cubits of 20.84 ± 0.1 inches.

Regarding the angle of the pyramid, 38 pieces of casing stone were directly measured at top or bottom edge. These show the angle between the face and the bed-plane. At Dahshur the bed-plane is inclined inward from 5° to 10° . Where casing has been removed, the only way to find the angle of slope is by the angle across the arris blocks. Five of these were found; and, calculating from them, the best three give $42^{\circ}28'$, $30'$ and $38'$, two inferior give $42^{\circ}43'$, $44'$. Giving half weight to the latter, the mean is $42^{\circ}35' \pm 3'$. The angle to the bed-plane is on the east $46^{\circ}1' \pm 4'$, on west $46^{\circ}3' \pm 9'$; but the angle varies from $44^{\circ}59'$ to $47^{\circ}7'$. The tilt of the bedding planes therefore

averaged $46^{\circ}2' - 42^{\circ}35' = 3^{\circ}27'$, varying from $2\frac{1}{2}^{\circ}$ to $4\frac{1}{2}^{\circ}$. With an angle of $42^{\circ}35' \pm 3'$, and a base of 4168.5 ± 1.9 , the vertical height would be 1915.4 ± 3.5 inches.

The azimuths of the sides are N. $92^{\circ}4'$, S. $92^{\circ}8'$, E. $2^{\circ}7'$, W. $2^{\circ}13'$, E. of true N.

6. [Among the chips in the centre of the south side there were many small pieces of black granite, which had come from a large pyramid-shaped block. These were doubtless the remains of a cap stone, like that of Amenemhat III's pyramid at Dahshur, now in the Cairo Museum. A few hieroglyphs could be seen on the granite, and these are shown on pl. xxiv. There are two sizes of hieroglyphs, and apparently vertical as well as horizontal lines.

At the SW. corner of the pyramid base, cut in the marl, was a pit, some 3 ft. square and 3 ft. deep. The contents had been disturbed, and had set into a solid mass with the sulphate of lime. The contents were a leg bone (of an ox?), three model bricks, and scraps of pots, one of type 67 x₂. There were no pits at the other three corners. There was a foundation deposit at the SW. corner of Amenemhat I's pyramid at Lisht, but at no other. (MACE, *Bulletin of Metropolitan Museum of art*, Nov. 1921.)

A plain wooden box was found placed in a shallow rectangular pit 45 inches square, and 30 inches deep in the centre, cut in the marl bank on the north side of the south sand trench, which ran round the pyramid. Outside the box between its west side and the side of the pit were a very rough limestone bowl, pl. lxvi, 7, and two pottery dishes 2 G₅ and 2 T₂ standing on edge. Inside the box were the bones of an infant, head south. Dr. Askren, who cleared the remains, states that the age of the child was certainly under 5 months. The box was sealed at the south end (pl. lxiv, 198). There was no inscription visible on the lid. The whole deposit was covered over with chips of broken marl. The sealing being that of an official of the Treasury, this was no chance burial, and it is tempting to see in it a foundation sacrifice. G. B.]

7. The nature of the site led to extraordinary precautions against subsidence. Though the knoll, and the rock at that level around, is of fairly good hard limestone, it rests round the south and west, at the base level on a brown marl, which is easily worked into plastic mud; this same stratum recurs

about twenty feet below the base. The architect Anupy was evidently afraid of rain storms making the base slippery, and the whole thrust of the sloped casing pushing it outward by sliding on the wet marl. Once or twice in a generation a fall of an inch of rain in half an hour takes place; this would shoot off the sloping casing so that in the middles of the sides there would be $2\frac{1}{2}$ gallons of water flowing over every foot of the base in a minute. As such rain never continues for more than an hour it was better to absorb it than to try to provide drains sufficient to remove it.

The first security was cutting a socket two feet or more in depth, in which the pyramid was based, so that there was a rock abutment to prevent any spread. Then outside of this a sponge of sand was placed, equal to a third of the whole area of the pyramid, so that an inch of rain on the pyramid would only be three inches of water in the sponge. Held in that way it could do no harm, as it would scarcely sink through the couple of feet of sand. A layer of rolled desert flints ten inches thick lay over the sand, butting against the edge of the strip of pavement. On the plan, pl. viii, at the S.E. corner is marked SLOPE, with an arrow shewing direction of fall; the two slopes run down to a flat strip in the bottom of the trench. This flat strip can be traced in the plan round the whole pyramid, except at the N. part of the E. side, where the two slopes meet directly.

The structure of the base may be seen from plate iv. In the top view of the S.W. corner, the nearest foreground is the edge of the brickwork at the top of the pyramid. The line of blocks from low left to high right is on the edge of the casing socket, which lies within it. Beyond that is the wide trench with sloping sides to hold the sand bed; it is wider on the south than on the west side. Beyond that on the south is the line of pavement and of foundation of the enclosing wall of stone; on the west there is a narrow way and then a line of rock wall, which was cased with fine stone. Furthest out are mounds of chips, thrown out along both sides.

The middle view has the edge of the pyramid top in the foreground. Then the line of pavement, and foundation of the south enclosure wall beyond it. Lines of tip heaps of rubbish are outside of that. Beyond are clearance made to test all the surface of the rock, which was also bared before throwing out the rubbish. At the top of the view

is the line of circular pits in which trees were planted. The bottom view has the top edge of the pyramid in the foreground. Beyond are the three levelled surfaces cut in the rock for foundations of the pyramid temple, on the east side.

In plate v the upper view has the rock wall in the foreground, along the west side; it was cased with fine stone. Stretching straight forward is seen, along the south side,—the socket for casing base on the left, the sloping trench steeper on the north than on the south, the flat wall on which the casing of the wall stood, and on the right the inner face of the core of stone walling.

The lower view is along the west side, showing the sand trench and the buttressed rock wall in the distance. The foreground stone on the left can be seen in the outer corner at the top view of pl. iv.

Plate v A is of the rock-cut wall with buttresses left, which were cased over with fine stone, of which some blocks remain. The bars of paving in the lower view were to carry the ends of the paving blocks, so as to insure that they did not rock. See also pl. li, 1.

Plate vi shows first the ends of the rock mastabas, and the gangway between them and the rock wall. Next is the other side of the rock wall, and the gangway between that and the edge of the casing socket cut in the rock. The two lower views are of the NE. corner of the brick wall, and the N. face with steps to go up on to the wall.

Plate vii is of the rock mastabas, and the steps against the N. wall.

[On the east, north of the temple, the sand bed covered a small pier of brick-work, which was probably used for levelling purposes. On the south, placed on the rock bed of the sand trench were, in one case 3 loose bricks, standing on end, angle to angle forming a triangle; in another, 2 bricks one lying flat, and the other standing on its end on the top of it. G. B.]

Outside of the sand sponge is a pavement, which is well preserved along the south side. This is at the foot of a wall which went round the whole area; it is shaded diagonally in the plan, so far as it remains. On the east, it has been entirely removed; the ground being lower there, it was all masonry and therefore became a stone quarry. But on the west and north, where rock was excavated, the core of the wall was left of native rock; see pl. v, where the buttresses are left projecting in the rock, and some of the panelled

casing is set up in the distance. For a nearer front view of the casing see pl. li, 1, and for a plan and section of the wall, pl. xxiii. The intervals of the buttresses vary somewhat. Numbering them from the north to the south, there are wider buttresses at nos. 13, 24, 34, 44 and 48. The intervals between the middles of these are 1009'7, 1006'2, 1004'7, 474'0 inches. Considering the rough core work of the buttress without casing, the first three of these are closely equal. Yet there are 11 spaces in the first, and 10 in the second and third intervals. There was then some care in spacing the big buttresses but little regard to the number of small buttresses. Nor are the big buttresses in any regular relation to the end of the wall.

By the SE. corner there is a wide trench left in the made ground of this region, where the stone wall and its pavements and their foundations have been removed. Just at the corner the foundations remain, but without any indication of the wall line.

The lines of the great sand bed are interrupted on the north by a small shrine, S, of which rock-cutting for foundations remains; fragments of the sculptures from here are on pl. xvii, marked "North Shrine."

8. On the east the lines are broken by the foundations of a temple. The rock cuttings on the inner slope held the structure, of which many pieces were recovered in 1889. The largest block is in the Cairo Museum, other fragments are in University College, and a relief of the king's head was sold in the Kennard sale, lot 34. There was found but little here in 1914, see pls. xvi, xviii. The two large rock-cut hollows in the outer slope did not bear a structure, as they were covered over by the sand bed and its pebble covering.

[Two foundation deposits were found in clearing out the site of the king's temple. One was at the south-east corner, and the other on the axis. There were no pits; merely several little pottery saucers laid in the sand, in what may have been meant for rows from E. to W. Types of saucers 2 A-2 A₅.

Chips of red granite showed that the temple had been adorned with lintels and jambs of that material, carved with hieroglyphs coloured green. There may also have been a granite shrine. The scrap of grey granite with the hawks and *onkh* was found in 1921 in clearing away the débris at the base of the pyramid west of the temple, and may have been part of an altar, like that of Senusert I in his temple at Lisht (Cairo Mus.) (pl. xxxvi, 55). G. B.]

9. The interior of the pyramid has been described in *Illahun* pp. 2-4; as that is long ago out of print, the principal matters are here repeated. The wide entrance, by which the sarcophagus was taken in, at tomb 10, is fully described by Mr. Brunton in *Lahun* I, pp. 12-14. At A is the shaft which was originally covered by the sand bed; the doorway at the bottom of it is only 31 inches wide, and could not have admitted the sarcophagus, which is over 36 inches high and 50 wide. The chamber into which this opens has a recess at the east in which is a well extending far below the present water level. In order to search this well, the water had to be raised 70 feet. To do this, stages of boards about 6 feet apart, covering alternate halves of the shaft, were put all down the shaft. On each stage was a man to lift full tins of water and a boy to pass down empty tins. The water was in this way raised and thrown out. Thus the well was drained to 22 feet below the passage floor which is 52 feet under the surface. The sides of the well at the bottom were greatly caved away, and more stone chips than water had to be lifted. The rotten state of the limestone made it difficult to settle what was the real bottom of the well; but Capt. Engelbach who attended to this work concluded that he had reached the undisturbed base.

The importance of this point turns on the chance that this was an entrance to other chambers. When we look at the water levels, the answer seems clear. Before working here, the water level was "about the level of the chamber floor" (*Ill.* 2). The date of Senusert II in the Egyptian chronology is 5400 years ago. The rise of water level is about 4 inches a century, or 5 at the extreme. Hence water was 18 feet lower, or, at the outside $22\frac{1}{2}$ feet. The Egyptian is not likely to have run a passage actually down to water, and hence the clearance 19 feet down without finding any passage opening seems entirely to preclude this well leading to other passages. It was a safety well to catch any storm water, and the rise of the passage upward at a slope of over 1 in 7 was a further precaution against water reaching the sepulchre.

10. Quoting now the principal matters from *Illahun*, the passage northward from the wall is 64 wide, 74 high at side, 80 to the curved roof; it rises at $60^{\circ}46'$. It is cut in hard marl. At 648 inches it reaches chamber C, which is 267 on N., 276 S.,

124 E., 127 W. The upper part of the passage is 894 long to D, 76 wide, 69 high at side, 79 to the curved roof. The upper end is roughly plastered. The chamber D is cut in the same marl, and lined with blocks of fine limestone, much broken up. It is 196.7 on N., 195.3 S., 123.7 E., 122.8 W.: the wall 136.2 high, and the pointed roof 37.3 more, or 173.5 in all. The passage to chamber E is 81.2 wide, contracting to 69.8 wide. It is 159.9 long to the beginning of the granite wall of E. or 178.9 up to the chamber. The southward branch to chamber F is 45.2 wide, 109.5 long, 62.8 high, or 72.8 in axis. Chamber F is 105.4 on N., 104.2 S., 126.4 E., 129.7 W.; 70 high on E. and W. 109.6 to the curved roof. The recess in the side appears to be later.

The granite sepulchre E is of light red granite, smoothly dressed, but not ground or polished. It is 206.2 on N., 206.9 S., 123.1 E., 123.7 W. The wall is about 72 high on N. and S., the curved roof 112.0 high. All the doorways have bevelled edges. The passages which lead around the chamber are cut in the marly rock, 52 wide, 62 to 70 high at sides and 72 to 79 in the middle. From the N. end of the sarcophagus the passage is 293 long, then west for 331, then south for 783, then east for 698.6, and finally 429.4 to the main passage.

11. The granite sarcophagus (xxv, 5) is unique in form, having a wide brim around the top. The dimensions are all in palms of a cubit of 20.623 ± 0.004 , agreeing with that of the king's chamber of Khufu's pyramid, 20.632 ± 0.004 . There is a slight difference between the values by external and internal measures, as the first is too short and the second too long, owing to correcting errors of work, 20.629 ± 0.008 internal and 20.618 ± 0.004 external. The dimensions are:

	palms	inches	mean scale	error
length top out.	36	106.116	106.056	+0.060
below...	33	97.165	97.218	-0.053
width top.....	17	50.046	50.082	-0.036
below...	14	41.24	41.244	.00
length inside...	28	82.495	82.488	+0.007
width	9	26.549	26.514	+0.035
depth	8	23.56	23.568	-0.008

As the bottom varies from 12.84 to 9.04 in thickness, the outside height is not any precise amount. Mean error of dimension 0.028 inch.

The accuracy of straightness of edges and planes is still more surprising. The mean error along the top edge is 0.007 inch, on the ends 0.004,

from a straight line. The curvature of the planes of the sides is only a hollow of $\cdot 005$ on the east, and a bulge of $\cdot 002$ on the west face. The skew of the planes is about the same amount. This is one of the greatest triumphs of accurate work in such a material that has ever been done. There can be no question that Senusert II was buried here, as we found the gold uraeus from his crown in the pyramid in 1920, see pl. xxv.

12. Two other sarcophagi are however comparable, and it will be best to describe them here. In tomb 7, south of the pyramid, is a granite sarcophagus, with a projecting plinth bearing the old panelled pattern copied from the wooden house, pl. xxiii. The narrowness of the chamber in which it is placed prevented my reaching more than one side for testing. On the east, the side has an average error of $\cdot 004$ inch from a true line. The dimensions, and differences from the mean palm, are:

	palms	inches	mean scale	error
length out.....	31	91.526	91.522	+004
width out.....	11	32.426	32.475	-049
length in.....	26	76.844	76.761	+083
height out, body	7	20.63	20.666	-046

Mean error of dimension $\cdot 0045$. The other dimensions could not be accurately measured. The height of the plane body averages 20.63 to a rather vague slope over the plinth: the height of the panelled plinth is 8.77, together 29.40. Here the mean palm $2.9529 \times 7 = 20.670$ for the cubit.

Below the panelled plinth is a low footing 3.25 high. The system of the panelling should be noted. Taking a whole group of three ribs and two hollows, the breadths of projecting groups are 2.51, 2.39, 2.40, 2.37, 2.44, 2.44, 2.41, 2.55 inches. Here seems to be a deliberate expansion of the two terminal groups, to neutralise the visual effect of the end. This is not due to the end rib only, but to the whole group. The small differences between the mean dimensions of similar parts indicate an unit of $\frac{1}{20}$ th of a digit, or $\cdot 0366$ inch having been adopted. The parts then appear to have been set out as follows:

	units	mean scale	mean actual	error
on sunk groups hollow	11	.402	.410	+008
rib....	13	.476	.472	-004
on forward groups hollow	12 $\frac{1}{2}$	.457	.456	-001
rib....	14	.512	.508	0
sunk door space.....	61	2.233	2.243	+010

It may seem surprising to suggest such small differences of parts being made to measure; but they agree so closely to a scale, that, taking into account the extreme accuracy elsewhere, we must credit this arrangement. The little square pitting on the panels, representing the crossing beam structure, has still visible the fine ink lines of the marking out of the work. These give the spaces vertically between the pits as $\cdot 0362$, evidently half a digit.

The canopic box of granite, in the same tomb, is 20.62 in side (mean error $\cdot 003$), but the outside dimension is left rather too large for the cubit, being 31.077 (mean error $\cdot 002$) which is $1\frac{1}{2} \times 20.72$.

13. Another finely wrought granite sarcophagus (xxv, 6) is that in the granite chamber of tomb 621, which lies beneath the north brick wall of the pyramid enclosure. This is of similar accuracy of straightness, having a mean error of $\cdot 0008$ on one side, and $\cdot 0006$ on the other side. The ends have been entirely smashed away. The pieces were fitted together again as far as possible, but some are missing. They are now buried. The dimensions will not agree to the palm used for the other sarcophagi; nor do they accord well to any other standard. The nearest simple accord that can be traced is as follows:

	measured	unit	mean scale	errors
length out	93.458	50	1.8691	94.105 -067
in	83.937	45	1.8652	84.694 -075
width out	37.969	20	1.8984	37.642 +037
in	24.737	13	1.9028	24.467 +027
height out	{ 33.040 32.385	17 $\frac{1}{2}$	1.8880	32.936 +010
in	28.854	15	1.9236	28.231 +062
lid thick	8.55	4 $\frac{1}{2}$	1.900	8.47 +008

The errors from a mean unit are so large that its presence is doubtful, the more so as the dimensions are very constant. On opposite sides the length only differs $\cdot 0008$ outside, and $\cdot 0000$ inside. The width differs $\cdot 0045$ inside, and $\cdot 0000$ outside. The height varies $\cdot 0087$ inside, and outside differs on the two sides as stated above. The parallelism of sides is therefore well under $\cdot 001$ inch, and it seems very unlikely that differences of scale should amount to some tenths of an inch. There is this to be said, that the unit is already known. It is the half palm of the 26 inch cubit, found at Kahun as a measuring rod, and linked with the northern foot of 13.1 inch. The mean unit of

1'8821 inches $\times 7 = 13'175$; the foot varies from 13'1 to 13'4 elsewhere.

The panelling is not very exact; the width of the four whole panels (door and two grooves each side) is 10'53, 10'57, 10'52, and 10'59 inches. The system of the panelling is irregularly adapted to fit the length.

The canopic box of granite is externally by units of measure, for the outer height is 10 palms, being 29'5; and the outside is 31'062 square (variation 0'040 to 0'087), which is $1\frac{1}{2}$ cubit of 20'71; the inside is 25'480 E. and W., 25'320 N. and S., and 22'3 deep.

The granite part of the chamber is fairly accurate; on N. 206'25, on S. 206'35; on E. 123'25 ($6 \times 20'54$), and W. 123'4 ($6 \times 20'57$). The equality of sides was therefore more sought than the exact cubit measure.

CHAPTER II

WORKS SURROUNDING THE PYRAMID.

14. OUTSIDE of the buttressed wall of stone, which enclosed the pyramid and its shrines and sand-trench, there were various other works grouped around. On the north-east was a lesser pyramid, apparently belonging to the queen, where the name of Atmu(-neferu?) was found in my work of 1888. The view of the rock core and the rock floor which underlay the casing is given in pl. xii, see also pl. x, top left and bottom right. The plan on pl. xiii shows where the rock floor has been cut for the insertion of the separate blocks of the casing, and also traces of the outline of the casing, in full line where visible, and connected by broken line. The lengths and azimuths of the sides are in inches:

	N.	E.	S.	W.	mean
length of casing	1071'2	1069'7	1072'3	1073'2	1071'6
azimuth of casing	2° 18'	2° 2'	2° 7'	2° 6'	2° 8'
length of core . .	941'4	948'8	940'4	962'2	948'2

As the paving is 16 thick over the rock floor on which the lines are drawn, the base was 11'5 inward at the paving level, and the mean length of the pyramid side was 1048'6 inches.

The east side of Senusert's pyramid and the west of the Queen's pyramid are parallel, within 1': the footing lines overlap by 15 inches, so the lines at the paving levels would be 64 inches apart.

The angle of the Queen's pyramid was measured on five arris stones; the largest and best gave

109° 52', equal to a direct rise of 54° 21', others fall on each side of this. As the angle directly measured was 54° 15' the bed plane was horizontal. With this angle and a base of 1048'6 the vertical height would have been 731'0 inches. Perhaps the intended angle was a rise of 7 on base 5, which is 54° 27' 40"; a variation of 6' is quite likely.

Beneath each corner stone of the pyramid there was a square pit covered by a slab, containing a foundation deposit, (see the foreground of pl. xii). This was most complete at the NE.; the pit had a ledge 7 inches deep, and sank 60 inches below that; it was filled with clean sand, and at the bottom had some small pottery vases and saucers, a model brick, some glazed beads and calf bones (*Illahun*, p. 5, pl. iv). There were other pits beyond the pyramid on all sides (see plan pl. viii). They only contained sand, except that on the west which had one little vase and saucer. The NW. pit and W. pit were covered with mortar and not with stone. The E. pit had been emptied anciently, and cut away to undermine the pyramid. Four of the pits were for deposits, and others may have been to catch rain-fall, and prevent it soaking all the ground.

[The south east foundation deposit consisted of a model brick $6 \times 3 \times 2$ at the top, and underneath in clean sand the ox-head and haunch, some small green glaze ring beads quite loose, a few twigs, together with several little pots, thrown in without order, and sometimes broken. The types are: 2 A (two), 2 E₃, 2 G₁₂ 5 H, 5 L, 5 M, 5 Y (three), 36 C₃, 59 S₂ (eight), 59 V, 59 V₃, 59 Y₆ (two), and two others, 25 in all. 2 G₂ covered the remains of bread: a 59 S₂ covered some fine black seeds: 36 C₃ had its clay sealing. G. B.]

15. On the north of this pyramid a shrine had existed, of which fragments of painted walls and of an altar of black granite were found in 1890, and of a diorite statue in 1914 with more pieces of wall scenes; see *Illahun* 5, pl. xii, and here pl. vxii.

The top of the rock core was searched for any cutting for a chamber; and all the surrounding rock was scraped and swept bare to make certain if there were any inserted stones. The brick facing of the scarp north of the pyramid had two vertical joints down it, a few feet apart; these suggested that later building had covered some opening. The wall was removed but only quite continuous rock was behind it. Further, a clearance was made

between the wall face of the rock along the whole face up to the cased mastaba, but no trace of an opening could be found. Opposite the cased mastaba there was an inserted stone in the vertical scarp, very accurately fitted in with a fine joint. It rested on another stone inserted in the floor of the rock cutting, so that it looked exactly like the covering of a pit half cut into a rock wall, such as occur in the mastabas of this age. The knowledge of this was kept by Aly Suweify during the war, and in 1920 every precaution was taken to keep the opening of it secret. On cutting out the vertical slab, the rock was quite solid and continuous behind it; and on raising the flat slab and removing a bed of clean sand, the rock also proved continuous. The whole insertion was a blind.

16. The clearance around the large pyramid was thoroughly done, out as far as the great brick circuit wall in 1914, and completed in parts in 1920. The whole of the stones and sand were removed over this area (except in the SE.), and the rock swept clean with brushes. Every fissure was examined to see if it were natural or a joint of stone. No trace of any opening could be found. At the SE. the ground is largely made of chips up to the general level; and, to test this, trenches were run parallel only three or four feet apart, and the stratification of the rubbish observed. If there were any entrance here it would have to be left open, or opened, for burials after the pyramid was finished, and some sign of hole would be seen in the strata of chips. There was no trace of any opening found in all this region. In the course of making these cuts, one trench exposed a brick wall, and on following it a stairway was uncovered (see pl. viii), one side of which had been removed (detail in pl. xxiv). This had been a gangway for the architect and other officials to go up the hill, while it was encumbered with all the masons' work. When operations were ended the stair was heaped over with rubbish in levelling the site. In the view (xxv A, 9) there are some loose bricks in the foreground; a wall in shadow in the middle is a skin wall built to keep rubbish from the site of the thick wall. The latter has been built, and then grubbed up for bricks, leaving only four courses visible here. Beyond all this is seen the stairway going up to the pyramid corner.

17. In early times there had been extensive tunnelling, behind the broader brickwork which carried the stairway up the great wall on the north. This

we examined, but no opening was found in the rock. The high wall on the NW. corner (pl. vi) had obviously no opening in it filled up, and no entrance could have been made through it. On the west where it was broken, we cleared it away and found solid rock. There was a chance of a pit beneath the blocking of two gaps in the northern buttress wall, near the shrine S, marked as gaps in the plan. On removing part of the blocking, it was clear that no pit existed there.

Failing to find any concealed entrance which could give access under the Queen's pyramid or the northern mastabas, we sank a shaft in the rock at the SW. corner of the eastern mastaba. This position was taken as likely to intersect any long passage which might give access beneath the mastabas, similar to the passage on the north of other pyramids of this age. Nearer to the Queen's pyramid there was a greater depth of hard rock. This shaft was sunk to 45 feet deep; from it cross passages were cut in the two marl strata, equivalent to those in which the southern tombs 7 to 10, and the pyramid passages, had been excavated. These cuts ran north and south to intersect any passage east to west. Subsequently in 1921 Mr. Brunton cut a tunnel from the upper level in this shaft diagonally beneath the pyramid to the NE. corner, where another shaft was sunk, thus establishing ventilation; branches from this were cut to the NW. and SE. corners and to the middle of each face (see pl. xxiv). Then a similar set of tunnels were cut at the bottom level. Finally a vertical shaft was carried down beneath the centre of the pyramid from the lower tunnel, and beneath the middle of the north face. Thus every possibility of a chamber beneath this pyramid seems to have been tried. It is certain that the queen was worshipped here, as there were remains of her statue, altar and list of offerings.

This region will be best seen on pl. x, in the panoramic views from the top of the pyramid. The upper view shows the whole length of the enclosure wall on the east side; at the right the great corner block of foundation; in the middle the cuttings in the rock beneath the temple; at the left the queen's pyramid, the mastabas not yet having been dug out.

The lower view has the queen's pyramid at the right, with the outer wall receding behind it. The eight rock mastabas have small square drainage pits between them; the fourth was cased with fine

stone and inscribed, but only scraps remained. Between the sixth and seventh the steps are visible, which are shown on pls. vi, 4; and vii. The outer wall is built against the rock scarp. At the cut between the third and fourth mastabas the cutting was pushed too far north, and cut into the scarp-line. Beyond the scarp are the rows of tip-heaps of the rubbish which was removed from the mastabas.

18. The row of eight rock mastabas along the northern side is a most striking sight from below, see pl. vii. Of the one of them that has been cased with fine stone, the foundations of the pavement and casing are shewn on pl. viii. One block of the sculpture was left, see pl. xvii.

[At each corner we found little square pits for foundation deposits similar to those at the Queen's pyramid. A photograph of the north-western is given on pl. xv, fig. 5. The south-eastern had been cleared anciently, while the south-western was disturbed, and we only found two pots, 38 A₂ and 5 Y. The north-eastern was intact. It contained the usual brick, and calf's bones (head and haunch), beads, and pots of the following types: 2 A₃, 5 H, 5 L₃ (ten), 36 C, 36 C₂, 36 C₃ (two), 38 A₃ (six), 48 Z, 59 S₂ (two), twenty-five in all. The beads were contained in two 5 M: another held small fruit(?). Many of the pots were stained with organic matter, and several had been broken. G. B.]

The mastabas had been left isolated by the cutting of trenches to detach the pyramid knoll from the hill on the north-west. They, and the smaller pyramid, were quite unsuspected at first, the hollows having been entirely filled up with debris and blown sand. It was only my work of 1888 and 1914 which revealed them. The pyramid pavement being taken as zero, the trench in the NW. corner is at 20 inches level, and the tops of the mastaba blocks from west to east are at 207, 177, 151, 116, 135, 114, 115 inches. The top of the brick wall still remaining at the NW. is 200 level.

It would seem certain that there has been a burial associated with the cased mastaba, even if the others were left unappropriated; yet none of the attempts which are described above have led to any such burial being found. It has been suggested that the tomb 621, the sepulchre of which comes under the wall close to the mastabas, may be that belonging to the cased mastaba, and the pyramid may have been for the worship of a queen buried in one of the tombs 7 to 10 on the south.

[A small point worthy of mention is that although we searched in the most thorough way, over and over again, we could find no tomb shafts between 607 and the Sed-heb chapel. There were shafts and a mastaba further north, but this area was absolutely virgin. There was no peculiarity in the rock to account for this. It was no worse than that in which 607, 610, and 618 were cut. Now, from this high ground an excellent view is obtained down into the pyramid precincts, especially the row of mastabas. One is tempted to imagine that this region was forbidden to the officials, whose grave-diggers might pry into the secrets of the construction. It was, perhaps, this very possibility of being overlooked that led the architect to place the royal tomb shafts where we found them, south of the pyramid. Tomb 621 is on slightly lower ground, and the work there may have been out of sight: but this was not actually tested by us. G. B.]

The square pits between the mastabas, and along the passage south of them, were for catching rain-fall, as the ground slopes down to them. Where they are cut in marl they have been lined with limestone slabs. The levels around the queen's pyramid, above and below the pavement of Senu-sert's pyramid, are:—SW. paving-floor—2 inches, rock-wall floor +2, NW. socket —1 and 0, top of paving round casing +15, top of rock core +79, NW. corner of court +10.

19. The great brick wall that surrounds all the pyramid tombs is well preserved around the south-east, along the north where it faces the rock scarp, and remains a little above it near the Queen's pyramid, and facing the scarp along the west side. Originally a thin retaining wall was built to hold back the made ground on the south and east, and keep the site for the great wall clear. Last of all, after the works of the pyramid were finished, the great wall was built to enclose the whole group, and only leave the upper parts of the pyramid visible above the wall.

The original height of the wall can be inferred from the lower part of the flight of stone steps which remain in place along the north wall, pl. vii. A projecting mass of brick was built against the wall to carry a stairway for ascending to the top. From the first step to the butt end is 1431 inches; of this we must allow a platform at the top as wide as the stair, 46 ins. and a safety wall as wide as that along the stair 58 ins. This takes

104 off the length, leaving the rise 1327 long. As the stair rises $41\frac{1}{2}$ in 190 inches, there would be 291 rise on 1327, and this gives the total height of the wall. As the highest part of the adjoining rock is under 200, the wall would be 91 over the highest ground, and the rampart which would probably be 60 high for the guards just to see over it, or 141 in all. This would be sufficient to prevent any one scaling the wall from outside. Around the other parts it would present a face nearly 30 feet high. The stone steps were 21 ins. in the tread, and had 4.6 ins. rise. The width of the stair was 96 inches, with a stone border 22 inches wide, and a brick side wall 36 wide at the bottom, thickening to 51 inches, as the steps overlapped the batter of the great wall.

[The wall where it faced the rock scarp was built with layers of reeds, mainly laid at right angles to the length of the wall, between every four corners of bricks. Where the wall remained in its lower courses at the south-east corner under the chips there were no layers of reeds. They were perhaps inserted to drain away moisture running down between the rock-face and the bricks. The wall was covered with a facing of white plaster. This was only seen where the bricks of the little cross walls, built subsequently, had preserved it. A stone torus-roll protected the angle near the Queen's pyramid.]

At the north-east corner was an irregular circular pit, about 3 feet deep, which contained nothing. Thinking this might have been for a foundation deposit, we searched carefully at all the other corners, but no other pit was found. G. B.]

A little east of the end of the stairway mass the face of the brick wall has been removed, and the rock behind it is bared. The recessing in the rock is apparently the butt end of the first rock trench through the gap in the buttressed wall, and it was run too far north.

20. Around the great brick wall on the east, south, and part of the west sides there were pits sunk in the rock, on the chip platform, in which trees had been planted in Nile mud soil. The distances of the trees average on the east 205.5, on south 206.8, on west 209; hence it is evident that they were 10 cubits apart. The number on the south, including the corner, is 42, on the east excluding the corner 42, on the west similarly, 12. These numbers suggest that each of the 42 nomes planted a tree on the south and a tree on the east.

The share of the nomes in the next pyramid, that of Amenemhat III, makes this meaning of the numbers probable. Certainly it was the spacing and the number which ruled, and not the total length. The diameter of the pits averages 89 inches. Each pit in the plan is put in from measurement of it on four sides, so that the irregularities are preserved here.

[The roots of the trees planted in these pits were sent to Kew Gardens for expert examination. The Director reports as follows: "The final attempt to identify these specimens has unfortunately proved unsuccessful. Bark is present on some of the roots, but its condition is such that several details of its structure can not be determined. The structure of the wood is much better preserved, but has not afforded a definite clue to the affinities of the plant, although a comparison has been made with the wood of a number of plants selected on grounds of probability.]

21. Beyond the brick wall and tree-pits, due east of the temple, was a mass of brickwork, apparently a sloping road-way to the pyramid temple, (pl. i, 2), too much ruined to admit of planning. No definite rooms could be seen: it seemed to be a platform of brick, mainly sloping slightly to the north. Here lay in quantities small pots of the following types: 5 D₂GV₂, 6 W, 56 G₂, 57 J, 58 C₆, 59 U₄, 67 C₆ S. There were also several limestone lamps, like pl. lxvi, 3, 4, all broken. This seems to have been a place where the poorer people were allowed to come and make their offerings, but the presence of the lamps is curious: this is like the heaps of small offering vases and cups outside of the temple of Menkaura at Gizeh.

Out beyond the brick wall and trees at the north-east corner is a low mound consisting mainly of limestone chips. At the northern end of this a slight depression indicated the presence of a pit. On working it out, we found a *circular* shaft, 4 ft. 6 ins. across, sunk partly in chips, mainly in rock, to a total depth of some 20 ft. It was filled with loose chip and builders' waste, including some XIIth dyn. sherds. It seemed a barely possible entrance to pyramid passages, but it led to nothing. There seems to be no reasonable explanation of its presence, unless it were a rubbish pit. There is another circular pit 15 feet deep out beyond the south-west corner. G. B.]

22. Outside of the great wall, about 230 feet to the west (see pl. viii), while clearing in the chip

ground banked up in the quarry, we found a very strange stone-lined pit, see pls. xiii-xv. The pit was 59.0 inches on N. and 58.6 on E. The lining of the sides and floor was of limestone blocks, 13 inches thick, carefully fitted. Outside of that was a brick wall at 25.5 from the pit about 7 inches thick. The whole was enclosed in a square brick building or court, 272 inches on W. and about the same on the N. as shewn by a fragment of the E. side. On the south side of the pit is a gap in the wall round it, to which an irregular stone stairway leads. The pit is 60 deep, and the brick wall 25 high above the ground. When found it was supposed to be a tomb shaft, and was very carefully searched over the floor of the pit, but it was all native rock without any joint, beneath the paving.

On the eastern side of the pit, outside of the stone top of the pit (xiv, 5), stood three boxes, whitewashed, rather irregularly placed as on the plan. Each was sealed with a different seal of a high official. Another was placed at the head of the stairway. It is obvious that some ceremonial had taken place here, for which high officials had each to make their respective sealed offerings.

In each box was a pan of food-offering covered by an inverted saucer, and tied up in a cloth. The boxes, with the contents placed upon them, are shown in pl. xiv.

[A conceivable explanation of the pit would be that it was a small reservoir for water. This would explain its position, at the end of the main road-way into the quarry, the brick walling, to keep out sand-dust, the finely fitted stone lining, as the marly rock is porous, and the steps to give access. But it does not explain the boxes. These however were not confined to the neighbourhood of the pit.

The pottery found in the offering-boxes was of the following types: (1) 7 A with 2 G_{10} wrapped together in cloth, (2) 7 D alone, no cloth, (3) 7 C with 2 G_7 inverted over it, wrapped together; the inside of the 2 G_7 was whitened, leaving a red rim. These were the three boxes on the edge of the pit, from north to south. The order in the last photograph pl. xiv is 2, 3, 1. At the top of the stairway was (4) containing 2 T and 2 G_8 . G. B.]

To the south-west of this there were three other boxes buried in the chips in disconnected positions; between them was a later burial in a coffin of about the XVIIIth dynasty. (See Chap. XI.) Beyond these lay the great oar of one of the

funeral boats, retaining much of the colouring, and buried in the chips, (Bristol Mus.), see pl. xv, 6.

[The pottery found in these south-western boxes, was in (5) 12 E and 2 G_{11} ; the inscription on this box was just traceable pl. lxx, 1. In (6) 2 G_3 and 2 G_6 the sealing is drawn on pl. lxiv, 199; and in (7) 2 G_4 with 2 G_9 inverted over it, and sealed with the seal in pl. lxiv, 200. G. B.]

23. To the west of the pit, the ground leading in to the quarry had many logs of wood, laid level in the rock floor, some let in to the rock, others banked with chips, see pls. xiii, xv. These were evidently to aid in dragging the stones from the quarry; being placed across the gangway, it seems that they were the supports of long cross beams; or it may be that the runners of the sledges reached over three logs at once, and so slid upon them. There was no obvious wear on the tops. The logs were all old timbers of ships; three of the best were selected and brought away, the others were used up in the removal of the granite coffin of Paramessu at Ghurob. They would in any case be used sooner or later for firewood by the natives.

CHAPTER III

OBJECTS IN THE KING'S PYRAMID AND PRECINCTS.

By GUY BRUNTON.

24. THERE had been some doubt, for various reasons, whether Senusert II was actually buried in the Lahun pyramid or not. The finding of a few fine beads under the blocking-stones (*Lahun* I. pp. 13, 14) had tended to remove these doubts. But there can now be no question on the matter. In 1920 it was decided to make a thorough clearance, or rather turning-over, of the debris in the pyramid rooms and passages. A start was made with the rock-cut offering chamber leading out of the sepulchre on the south. There only some 6 ins. of dust and rubbish covered the floor, and within half-an-hour the uraeus from the king's crown was brought to light. This, which of course remains at Cairo, is shown in four views on pl. xxv, 1-4. The height from the lowest bend to the top of the head is 2.2 inches: and to the tip of the tail 2.9 inches. It is of solid gold, inlaid with the usual stones. The head is cut in lazuli, with the eyes of garnet set in gold. The hood is outlined with

lazuli, and the mid rib of gold is barred in the centre with lazuli. On either side the semi-circles are of turquoise. Below the hood the centre rib is bordered with two long pieces of carnelian, with two of lazuli beneath them. The tail, which is plain gold, rises up at the back, twisting and turning in the most lifelike way. At the back two loops are sunk into the hollow of the tail: these are for attaching it to the crown, and are clearly shown in the photograph. It could hardly have been hooked on; it was more probably sewn or fixed by wires: and this implies some soft material for part of the crown, perhaps leather or plaited work. Two pieces of inlay were missing when found, both of lazuli. The sifting gave us one, but not the other.

This uraeus is apparently the only piece of regalia actually worn by an Egyptian king, which had so far been found.

25. In addition to this, various scraps which were of interest, were found in the same room. The beads are drawn on pl. lxiii. Of the barrels, B, there were 7 of the finest polished carnelian and 7 of blue-green felspar: of the eight-ray beads, K₂, there were 5, of lazuli: there was 1 ring bead, N, of black glaze, and 8 ball beads, O, of a black and white mottled appearance, which may be decayed purple glaze. A few fine ring beads were also found: 11 lazuli, 3 green jasper, 2 carnelian, 1 gold, 1 turquoise, 1 yellow carnelian, and 1 pale green glaze. I believe that these fine beads are unique in green jasper: certainly they are in the clear bright yellow carnelian. They are just enough to give us an idea of the magnificence of Senusert's personal adornments.

Besides the beads, there were a few tiny pieces of rectangular blue glaze inlay, possibly from a coffin, or from a draught-board: some scraps of grey decomposed material (silver?): a few pieces of copper, with a bent-in rim, from some small vessel: fragments of wood and charcoal; part of a clay sealing (pl. lxiv, 197): the inevitable pieces of gold-leaf: a few human bones, including the femur: and a cowry. The charcoal may indicate that the robbers burnt what they did not require, as at Hawara (*Kahun* p. 17). The bones are those of a full-grown male, and tall, to judge from the femur. They are now at University College. It is impossible to say whether or not they are Senusert's. The cowry is the only evidence of a later burial, but this is most unlikely, and the bones are probably those of the king.

26. Some pottery was found in the offering-chamber, and in other parts of the pyramid: but it had been moved about in modern times, and we do not know its original position. The types are 2 M₄, coarse buff with rope pattern: 3 D, of fine polished red, with a small hole pierced in the bottom: 3 B₃, 7 J₃, 40 B, 90 U: 90 A with thumb-marks: 54 M₂, 67 P₃, 93 P, 93 P₂ all of fine polished red. XXII dyn. pots 8 M, 13 B, 13 K, 24 S were also drawn. On plate xviii of *Lahun I* are other types found in the southern passages, partly XII dyn., partly XXII dyn. or later.

In the first angle of the passage which ran round outside the granite sepulchre was a stone lamp pl. lxvi, 4, evidently left in its original position for lighting the passage. A pottery disc to hold the wick of a lamp was found in the offering chamber. The rim of a large limestone paint (?) pot pl. lxvi, 11 had also been left in the pyramid. In the oasis of Khargeh, lamp bowls and discs for the wick have been found, so the type may be considered general. (DE MORGAN, *Ethnographie Pré-historique*, 1897, p. 48.)

27. A few objects of interest came to light when the sand bed round the pyramid was being cleared. The various dates of these show the length of time during which the buildings were used as a quarry.

Of the XIIth dynasty (?) there were many wooden mallets and a few rollers (*Lahun I* pl. xx) either used in the construction or destruction of the pyramid. Also a wooden hoe (*id.* pl. xx), and up on the east face a large and heavy wooden wedge, perhaps a plough share, used to lever up big blocks. A number of very rudely worked bowls of fine white limestone, generally broken, are probably attempts of the workmen to fashion vessels out of builders' waste. By far the best example is pl. lxvi, 12, found with the XII dyn. jar 46 D₃. Two pieces of limestone with inscriptions are hardly legible. One is given on pl. xlix. It is dated in the year 5 (?), fourth month of the inundation (?) day 16 (or 18), presumably of Senusert II and refers to "Kherp-Ameny living for ever and ever" which was the name of the pyramid of Amenemhat II (BREASTED, *Records i.* p. 274).

Other objects found were the base of an alabaster canopic vase (?), on the north: part of an alabaster perfume vase, near the Queen's pyramid, both of XII dyn.: and part of a grey slate dish 10 ins. in diameter, on the south, which was probably looted

from one of the proto-dynastic tombs in the neighbourhood.

Close to the foundations of the stone wall on the east, south of the temple, we came across a small irregular pit, 4 ft. deep. In it had been dropped a roughly made altar 12 ins. square, of limestone. The offerings were represented by four round flat bosses. The surface of the bosses showed the smooth brown weathered surface of a well finished and used block.

We can date to the XVIIIth. dyn. a group of 5 dishes, types 2 X₂, 5 M₂, 7 B, 9 B and 9 G, found together in the north-east corner of the sand-bed; as also perhaps a fragment of a glass bottle in grey and white striped glass.

Of Roman times are the iron key (pl. xxxii): perhaps the wooden square (*id.*): scraps of pottery and burnt brick near the mastabas, and a pauper's burial in the brickwork of the great wall on the north.

Still later are two little pots of early Arab date with magical inscriptions (pl. lxx, 33).

28. Near the mouth of the small shaft which gives access to the pyramid passages a curious discovery was made of rectangular and oval lumps of mud, 4 or 5 in number, which had been used for growing wheat, the dried blades of which remained in large quantities (pl. xv, 7). The mud cakes show the shape of the vessels from which they were taken. Apparently they were placed here as offerings to the dead king, perhaps to ensure the fertility of crops. They recall to mind the "gardens of Adonis" mentioned by classical authors. See FRAZER, *Adonis Attis Osiris*, Chap. x.

The belief in the king's power of ensuring fertility has lasted to the present day, and when we were at work round the pyramid several parties of well-to-do-Egyptians, always including women, who had sometimes come from a distance, climbed up to the top. The women, so we were told, were those who were desirous of children. At Meydum women walk right round the pyramid, and drive their cows round for the same purpose. It is well-known that the number of native women who visit the museum at Cairo is due to their belief in the efficacy of contact with "antikahs", and not to a desire for intellectual improvement.

29. In clearing through the masses of chips round the pyramid and in the quarries adjoining, a few odds and ends turned up. On the south-west outside the walls we found a XII dyn. pot, 57 M, and

many remains of workmen's dinners: many nuts of various sizes with the ends broken to extract the kernels, date stones, small bones, a large round fruit, pieces of fish-skin, and part of a melon-rind. Some of the small nuts were in one of the usual little XII dyn. pottery saucers. There was also some of the red ochre used for marking blocks in the quarry close by.

A thick limestone paint pot (pl. lxvi, 6), from the northwest, still had traces of the red ochre at the bottom.

The quarry works on the high ground immediately north of the pyramid contained a small and very miscellaneous assortment of objects. These were the lower half of a big XIIth dyn. jar, used for plaster: a pottery lamp disc (pl. lxvi, 5): a model pot-stand of limestone (pl. lxix, 12): two small bowls 7 J₂: a quartzite grinder: coloured chips from the Queen's chapel or North shrine: round-topped mud-bricks: many pieces of hammer-stones: a pot, 10 K: nuts: a stone ostrakon (pl. lxx, 2): three pottery ostraca (pl. lxx, 3, 4, 5): and the drawing of Bes with snakes (lxix, 11). All these are contemporary with the pyramid. There were also two Roman amphorae. The quarry has been worked in recent times, and we emptied out a huge irregular shaped pit to a depth of 30 or more feet, only to find unmistakable marks of blasting at the bottom. In the chips here we also came across tunnels which robbers, probably modern, had made so as to search the surface of the rock for tomb-shafts, like that of the royal tomb 621, close by.

CHAPTER IV

SUPPLEMENTARY TO LAHUN I.

By G. BRUNTON.

30. In 1920 some additional work was done in the tombs of the princesses, Nos. 7—10, south of the pyramid. In 9 where an upper tomb had been partially prepared, a lower chamber had been cut out *under* the sarcophagus chamber, possibly to give access to the lower tomb. It was therefore thought possible that the sarcophagi in 7 and 8 concealed other entrances to tombs below, just as the entrance to the pyramid lay through the flooring of 10. The rock was therefore cut away by our workmen in each case, from under the sarcophagi, sufficiently far to make it certain that no other chambers existed in that direction. The

walls, generally lined with limestone slabs, were also very closely examined, if possible from behind, so as to leave no possible chances untried. In the course of this work we were able to recover a few objects, principally beads, from parts of the tombs which could not be reached in our work of 1914.

In tomb 7, we found a few beads which had been spilled by the robbers round the sarcophagus. These are drawn on pl. lxiii, where the materials are also stated.

Of carnelian there were 35 graded barrel beads, 22 graded cylinders, 3 double cylinders, one also pierced at right angles to its length, 11 ring beads, and 27 very small ring beads. Of green jasper, 2 very small rings. Of glaze, 17 pale blue and 1 dark green barrel: 1 dark green cylinder: 2 dark green drops with bifurcating holes: 1 eight ray of dark green: 2 dark green double-cylinder and 3 pale blue: 1 red, 1 white 2 black, coarse rings: and several hundred small pale green and dark green ring beads. These remain at University College with those found in 1914.

By cutting away the rock a little, it was possible to extract the wooden canopic box from its granite chest. It was perfectly plain, and undecorated in any way. See pl. xxv A, 10. One pot found here in 1914 and omitted from *Lahun I* is shown on pl. lvi, 7 B. The panelling on the end and side of the sarcophagus is drawn on pl. xxiii.

Mr. A. Lucas, Director of the Analytical Laboratory at Cairo, has sent me the following analysis of what was thought to be pitch, from the wooden canopic box (not the sarcophagus). The broken fragments of the canopic jar were found embedded in it, and adhering to the wood at the bottom.

"The sample of pitch-like material from II-Lahun (XII. Dynasty: Tomb no. 7; interior of sarcophagus of un-named princess) has been duly analysed with the following results:

	%
Matter soluble in petroleum ether	42.0
" " " absolute alcohol (hot)	93.1
" " " water (hot) after alcohol	0.3
Ash	2.7
Acid value, direct	87.4
" " indirect	174.7
Saponification value	151.2
Acid value, direct, of portion extracted by alcohol	134.4
Saponification value of portion extracted by alcohol	225.0

The sample has an aromatic odour with a slight pungency. The material is certainly not pitch (neither mineral pitch nor wood pitch) but is a resin which at present has not been identified."

The evidence that this tomb was used for a burial in the reign of Senusert II is given in *Lahun I*. It is the only royal burial that was made here during his reign, as far as we know. From the style of the tomb, it was not for a "Great Queen" but possibly for a consort or "*Khnumt nefer hezt*." Of the royal mastabas north of the pyramid, only one, the fourth, was completed; and, from the king's name in the sculpture from it, we know it was built by Senusert. The eight mastabas are evidently for royalties of lesser rank than the "Great Queen," for whom presumably the small pyramid was intended. As there is no other tomb which can be definitely connected with any of the mastabas or the pyramid, it may be that mastaba 4 and tomb 7 both belong to the same princess. She may have been the *Khnumt nefer hezt urt*, who we know died during the king's reign, who was worshipped at the Kahun temple, and whose name was actually found in the tomb of princess Sat-hathor-ant. The scrap of sculpture from the king's pyramid temple (pl. xvi, 28), giving the tops of a *nefer* and a *hezt* followed by the beak of a bird, almost certainly refers to the same princess.

31. In tomb 9, the lower tomb was partly re-planned. When the original plan was made, the lower tomb was somewhat under water. In 1921 it was quite dry, and it was then seen that the sepulchre had been floored at the passage level in its eastern half, while in the western it dropped to form a sarcophagus trench lined with limestone, see pl. xxii. This was an interesting point as it lent colour to the idea that this was the oldest of the royal tombs, the trench system not being used in any other of these. (*Lahun I*, 52.) The princesses of Amenemhat II at Dahshur were buried in trenches, or built sarcophagi, those of Senusert III in sarcophagi of single blocks.

32. In tomb 8, where the jewellery had been found in 1914, there was an interesting discovery. In that year, the offering chamber, though expected, had not been found. In 1920, when the rock-cutting was decided upon, and all the walls were minutely examined, it was found that the offering-chamber, the entrance to which lay within a few inches of the sarcophagus, was in its usual position and had been unperceived owing to the fact that

the roof had fallen, and obliterated the doorway. There was only just room for a man to squeeze in between the sarcophagus and the wall, and the clearing of the room took many hours. In the rubbish with which the room was filled, were beads, a flat alabaster lid, and an alabaster and obsidian coffin eye. These were all from the front of the chamber at various levels. Some scraps of copper were just inside the doorway. The lid of the large alabaster jar was half-way up and half-way back in the room, close to the south wall; two chips from the lid were found separately, and the jar itself was on its side near, but not on, the floor. The pottery was all broken, and the chamber had evidently been turned over by the original robbers.

The jar, which is one of the finest known, both for size and quality, is shown in photograph, pl. xxv, 7, and in drawing pl. xxvi. The lid is slightly chipped, but the body is quite perfect. On one side are eight lines of inscription, coloured in green. These give the name of the "royal daughter Sat-hathor-ant" and state that the jar would provide her with whatever she might desire from the earth or from the water. The translation is given in Chapter xiii.

The flat alabaster lid found by itself indicates that there were some small vessels which the looters removed from the offering-chamber, or just possibly from the sarcophagus. It was from the coffin that the eye had come, and also the beads. These consisted of 39 carnelian and 1 glazed cylinders, and 7 greyish-green glazed barrels. There was also half a large ball-bead of plaster, .8 in diameter, covered with gold leaf. The actual offerings, of which ox (?) bones and bird bones were found, were placed in dishes and vessels of pottery laid on the floor. These were badly smashed, but the forms of most were recoverable. The types are 2 M₃, 5 H₄ M₃ N₂, 7 J₂, 46 D₂ M₂ M₃, and 67 S. These types are therefore all dated to the early part of the reign of Amenemhat III.

In this tomb we also found a small niche (for a statue?) in the west wall of the ante-chamber, just above the ledge. Here were one glazed barrel bead, part of a female pelvis, a dome-shaped weight (?) of grey stone, weighing some 5 lbs, parts of one or two bowls (7 J₂) and two pieces of charcoal, a miscellaneous collection somewhat lacking in interest. The plan of the niche and offering chamber is given on pl. xxii. It will be seen that the plan of tomb 8 in *Lahun I* pl. xxii is erroneous in one

respect: the limestone walling does not run continuously from the north-east corner to the canopic recess.

Two additions may be made here to the list of *Khnumt nefer hezt* princesses given on pl. xv of *Lahun I*. The one is an unnamed princess on a stele in the Cairo Museum (LANGE and SCHÄFER, *Cairo Catalogue, Middle Kingdom Gravestones*, no. 20564). The other is a queen (and possibly also a princess) on the two quartzite statues from Tell Mokdam (NAVILLE, *Ahnas el Medineh*, pl. iv, A, C.). On the one are the titles "*Erpatet*, daughter of Geb, royal wife and mother, *Khnumt nefer hezt* — — —" with the addition of "*onkh zetta*" on one side and "*neb amakh*" on the other. A scrutiny of the statue in the British Museum suggests that the name may have been "Aat", as at Dahshur (DE MORGAN, *Dahchour II*, p. 101). The other statue bears the titles "*Erpatet*, mistress of the two lands, Atmu — — — royal wife, and mother, his beloved, *Khnumt nefer hezt* — — —." This string of titles may be compared with the fragment from the Queen's Pyramid temple at Lahun (PETRIE, *Illahun*, xii, 6) reading "mistress of the two lands, Atmu — — —," and would seem to show that the word *Atmu* is not part of a name like *Atmu-neferu*, but rather an epithet such as "beloved of Atmu," like the "daughter of Geb" on the first statue.

CHAPTER V

THE ROYAL TOMB 621.

By G. BRUNTON.

33. In close proximity to the quarry-workings, just outside the north brick wall, is a large well-cut tomb-shaft. This was found only half filled with sand, showing it had been recently emptied: and it was rumoured that a chief personage of the locality had excavated here a few years back. It was decided to clear the tomb out again, as it was a possible, though unlikely, entrance to tombs under the mastabas.

On plate xxii are given plans and sections of this tomb and its various principal features. The shaft is mainly cut in hard limestone, and descends until the softer marl is reached. At the mouth of it there are signs of brickwork. From the south side runs a long passage cut in marl, unlined, and with a barrel roof largely broken away. The entrance to this consists of two parts, lined and

floored with limestone, the outer one somewhat larger than the inner. The flooring extends for a little distance beyond into the passage. In the inner part, which is narrower, a large block has been placed, partly closing the entrance. In the outer part lies a rough block which was evidently intended to be moved in eventually, and so complete the closing. At the end of the passage, a descending flight of 16 rock-hewn steps is reached. These pass down between the two long wide ledges so often seen in the antechambers of this type of tombs. There are roughly squared holes cut in the walls of the staircase, two of which have been carefully filled in again with rock and plaster, showing they were used for constructional purposes. The actual tomb consists of an entrance-chamber, lined everywhere with fine white limestone: an offering chamber leading out of it on the west, cut in rock: the sepulchre itself, lying on the east, lined half with limestone, half with granite: and on the south of that, another room with the canopic recess on the east, both lined with limestone.

The offering-chamber has walls beautifully flat, but not plastered, except to repair broken corners.

The principal contents of the tomb were the finely-worked panelled sarcophagus of red granite, with lid: and the canopic chest of the same material. A flash-light photograph is given on pl. xxv, showing the sarcophagus, with its lid reversed on the floor in front, as found. Prof. Petrie has in sect. 13 already given the measurements of this, and of the canopic chest.

34. The condition in which we found the tomb showed only too plainly the handiwork of robbers. Floor blocks and wall blocks had been taken out in many places, and the rock tunnelled into, underneath and behind. A large hole had been excavated under the sarcophagus, and the debris piled in the rooms. On the exposed edge of some of the floor blocks could be seen the quarry marks in red paint. The masons chisel marks, revealed on the roughly dressed parts of the stones, were $\frac{7}{8}$ in. wide. This tunnelling into the rock had also been done over the doorway at the foot of the stairs, and in the sides and roof of the entrance from the shaft. In the floor, even, of the offering-chamber, though obviously natural rock, a round hole 2 feet deep had been cut. This was evidently the work of would-be looters. Finding nothing in the tomb, they had done their level best to find the hidden

treasure which they felt sure must be there. The condition of the sarcophagus and canopic chest are not so easy to account for. The canopic chest lay in the entrance chamber, undamaged, but its lid was smashed into several pieces. The two ends of the sarcophagus had been broken away; pieces of the granite were found at the bottom of the shaft, in the passage and in the entrance-chamber. The lid was intact.

35. In the tomb was a great quantity of XIIth dynasty pottery, mostly sherds; these lay at the bottom of the shaft, all along the passage, and on the stairway; there was very little in the entrance-chamber, and only a scrap or two in the offering-chamber. The type of pot was almost entirely the common form like 67 X₄, with a few large jars, but nothing else. In the first half of the passage there were at least 82 pots, in the second at least 46; in the rooms 4 or so. A small limestone lamp (pl. lxvi, 3) stood in the passage; and at the entrance lay a rough stone bowl, like those found in the pyramid sand bed. At the bottom of the shaft were a male pelvis and femur, two wooden bale-hooks, a rough little ushabti, pieces of a wooden stick 0.7 in. diameter, and pieces of iron tubing, 0.2 in. thick, 1 in. diameter internal, with traces of wood inside, and of copper between the layers of iron; also the usual XII. dyn. hammer-stones. Along the passage we also found the fragments of a black syenite statue (back of wig), pl. xxi, 11, and a scrap of head-dress in diorite. The whole of the débris in the burial chambers was most minutely searched, but not a vestige of wood or bone, not a bead, not a scrap of alabaster, no resin, not even the usual gold foil, rewarded our efforts.

36. The history of the tomb seems plain. That it was a royal tomb is at once obvious. Its position is strange, with its entrance near the quarry; but the chambers were made to lie just under or inside the brick wall surrounding the royal pyramids and mastabas, though not in definite relation to any of them. The quality of the person it was intended for is shown by its construction. The walling of the sepulchre with granite, and its gable roof: the elaborate and finely worked granite sarcophagus: and the plan of the chambers with the separate entrance-chamber, and canopic-chamber as well as recess, are only paralleled by the king's own tomb under the pyramid. We are reminded of tombs 9 and 10 on the south side with their

long corridors running in under the stone wall, and their canopic recesses to the south of the sepulchre. But this tomb is very much more sumptuous than tombs 7 and 8, where we know important princesses were buried. It seems then only reasonable to conclude that it was built for a queen: and as no other tomb here can be connected with the small pyramid, we may provisionally allot this one to it.

The next point which seems established is that the tomb was completely prepared for use, but that the interment was never made. The absolute sterility, as it may be called, of the burial-chambers is a clear proof of this: and the presence of such objects as were found can be satisfactorily explained in other ways. The pottery, chiefly in the passages, was all of the kind found everywhere on XII. dyn. sites, towns as well as cemeteries. There are no signs of the other forms found in the offering-chambers of tombs 7 and 8: in fact there was less pottery in the offering-chamber here than anywhere else in the tomb. I think these sherds were all workmen's rubbish, like the hammer-stones, stone bowl, and possibly the lamp, left when the tomb was finished, to be cleared away before the burial. The canopic chest was never placed in its recess: the limestone walls must have shown signs of damage if it had been dragged out of it by the robbers. Neither does the sarcophagus show any signs of the damage which it would have received, had the lid been levered off, and overturned on to the floor. It lies there intact, still awaiting the burial. The odds and ends at the bottom of the shaft have no doubt been thrown down from the surface: at any rate they give no proof of a queen having been buried here. The only thing which points to the occupation of the tomb are the scraps of syenite and diorite statues. These of course could have been prepared before hand, but they are more likely to be two of the fragments of statues and temple furniture which were found here and there at the surface, in the quarry workings close by, and in a line from there to the "Sed heb" temple to the north-west.

The breaking out of the ends of the sarcophagus is not easy to account for. It was not to get at the mummy: one end would have sufficed, to say nothing of the lid not being in place. It might have been done in the rage of disappointment at finding no body and no valuables: or possibly in spite, to prevent the future use of the tomb. Pieces

of the granite we know were carried out up the passage, and away to the shaft: in fact some of it has disappeared entirely, as we could not completely reconstruct the ends of the sarcophagus. It looks like the work of those who wanted the granite, probably the modern native.

The broken pieces of granite from the sarcophagus were buried by us at the bottom of the shaft.

CHAPTER VI

THE SED-HEB CHAPEL.

By G. BRUNTON.

37. ON the high ground north of the pyramid lay the foundations of what was at first taken to be a mastaba. The position of this building is shown on the general plan pl. iii. Much work was done all round this in order to find a shaft, but without success. The actual construction remaining consists merely of large blocks of limestone, forming a rectangle, with a projection on the east side, laid with smaller and more irregular blocks. At each corner of the rectangle were pits for foundation deposits; the whole was surrounded by an area of brickwork. For plan see pl. xx.

In the centre the stones have been removed and plunderers have dug a large hole, no doubt in search of a burial. It was difficult to say what the extensive brickwork represented. It is now only a mere skin, or colour on the surface. Nevertheless, with the most careful cleaning it was possible in parts to plan the actual bricks. These are of two sizes: the small immediately in contact with the stone work, the larger outside, with a clear line of division running parallel to the sides of the building foundation. The brickwork may have formed a pavement round the edifice: it probably did so, as there is no sign of a bedding trench for a wall, neither are the bricks laid in a suitable way for a wall, nor in any case was one brick found on another. In the centre of the west side, 9 bricks were laid in a different pattern. These were removed, but there was nothing underneath to explain the peculiarity. The foundations projecting on the east seem to have been for a portico, although it is not in the centre of the building. The pits at each corner still contained their deposits, with the exception of that at the north-west, which was empty.

38. The south-west pit measured 32 in. east and west, 38 in. north, and 33 south. The deposit (xxvA, 1—7) was found to consist of a bull's head and haunch, a model brick, 32 little pots of 6 main forms, 2 reed trays, a little bag of white linen, an inscribed clay sealing, a little roll, sewn up in white linen, and a small triangular, shaped flat piece of bone. At the top, which was presumably covered over with brickwork, were the brick and the bull's head with the haunch bone, and 2 trays immediately beneath. A few pots were at this level, with the majority beneath. The bag and roll were with the lowest layer of pots. Most of the pots were broken anciently when thrown in, and showed no sign of arrangement. The clay sealing, at the bottom, under a saucer, must have broken off the string which was tied round the neck of the linen bag. The pit was filled in with clean sand. The bull's head was dark-haired; a similar one in better condition from the north-east, is photographed pl. xxvA, 8. It had been placed on one reed-tray, while the haunch rested on the other. These were similar in construction, but the first had much larger reeds. It is photographed on pl. xxvA, 1. The long sides consisted of 2 long reeds each, the ends of single reeds lying in between the long ones at the corners,—all lashed together at the corners, and to the tray itself. The linen bag has not been opened: it seems to contain nothing but folds of linen. The roll has a core of pith, with the white linen covering neatly sewn up along its length. See pl. xxvA, 4—6. A drawing of the sealing is given in pl. lxv, 342. This reads *Khetem ur*, Chief Sealer. The types of the pots are as follows: 3 Q (3), 5 D₆ (4), 5 H₃ (10), 5 H₇ (4), 67 B₄ (3), 67 B₅ (3), 67 B₇ (3), and 68 T₂ (2), making 32 in all. The ware is of the usual rather rough light brown. One saucer was inverted over some seeds (?), and another contained barley, and was covered by an inverted saucer. A third also contained barley.

The south-east pit and contents were very similar. It was about 5 ft. deep, and in the upper part were 20 ordinary bricks thrown in pell-mell. At 3 ft. down there was a thick layer of very fine sand for about 8 in., with a few pebbles in it. The deposit began at a depth of 4 ft. 7 ins., and the arrangement was the same as at the south-west. The bull's head here was clearly light-haired. The sand under and round the neck was caked and discoloured, suggesting that the animal had been killed on the spot. One tray was just

below the head, and had what looked like an ox-tongue on it. In this pit there was a third tray, made of finer reeds and measuring $11\frac{1}{2} \times 8$ in. There was no indication of what it had held. The linen bag (pl. xxv, 8) came from here. There was no sealing to be found. The pith roll was firmly cemented to the bottom of the pit by gypsum. The pots were 33 in number, of the following types: 3 Q (2), 5 D₆ (7), 5 H₃ (5), 5 H₇ (4), 5 Q₂ (1), 58 Y₅ (2), 67 B₄ (1), 67 B₅ (1), 67 B₇ (7), 68 T₂ (2), and 68 T₄ (1). One pot of type 67 was sealed with clay: two others contained barley, of type 5, 5 contained seeds, 1 barley, 2 what seemed to be flour, and 1, fruit with skin and a large kernel.

The pit at the north-east was similar: it was here that was found the bull's head in the wonderful state of preservation, shown in pl. xxv, 5. The immediate burial after death may account for its condition. The hair is dark. The pots, numbering 34, were of these forms: 2 A₅ (1), 3 Q (6), 5 D₆ (1), 5 H₃ (8), 5 Y₃ (1), 57 L (1), 67 B₈ (9), 67 B₅ (2), and 67 B₇ (5). Four other pots probably came from this deposit: 2 A₃, 5 D, 67 B₆, and 68 T₃.

A comparison of the types and numbers of pots in these deposits shows that the numbers were roughly equal, averaging 34 in each: the proportion of flat open saucers (types 3, 5) to tall jars (types 57, 67, 68) was roughly 5:3 in the SE. and SW., but 1:1 in the NE. This latter also differed in having no linen bag or pith roll.

39. Turning now to the building itself, we can say very little. All the fragments lying around were collected and examined, however small. The foundation blocks, being on a high and exposed point, were covered with a thin layer of debris only; and the stonework had been removed so thoroughly, that only the smallest chips were left on the site. On plate xxi are given drawings of all the pieces of sculpture and architectural details which were recovered. There were no indications of any sort that pillars or columns had formed part of the building. There were four different sizes of torus moulding, the small and plain, 47 and 48, and the large with crossed bands, 46 and 49. Of 49 we found pieces totalling 12 ft. in length from all four sides of the building: 46 came from the north, south, and east only. The fragment 42, with two wide parallel flutings, cannot be from a column, the segments of circles being bisected by diameters which are parallel, and not radiating from the centre. A ribbed ceiling

has been suggested. Pieces of flat panelling are 40 and 41:31—33 are like the decoration seen along cornices. The stars 12 and 13 are the usual ceiling decoration.

The scraps of inscription tell us little, beyond establishing Senusert II as the builder: the cartouche Ra-kha-(kheper), 17, and the Horus name, Smu-(taui), 15. The hieroglyphs which are finely cut, show at least three sizes of large birds, 14, 15, 16. One fragment with the duck (25) implies a scene with offerings, as does probably the piece 22. The elaborate house-front or sarcophagus (24) is remarkable.

40. Of the furniture we have a few chips of alabaster, grey schist and black granite, and several of diorite. No. 2 in diorite is part of the projecting rim of a circular altar or vessel of some kind: 4, 5 and 6 of diorite are parts of another monument of diorite, 5 and 6, showing the same angle between the worked faces; 7 is the finger from a grey schist statue; 8, a toe from one of diorite; while 9 may be the ankle of a kneeling figure; 10 is just possibly a girdle knot of diorite. Fragments of black granite included one with a finger.

Scattered over the desert all round we found other small pieces: one of diorite (3) lay 100 yards to the north, and shows the same angle as 5 and 6. 1 was between the building and tomb 621, to the south-east; it is of diorite, and its circular inscription, like 2 only larger, gives royal titles. A scrap of worked black syenite was also picked up close by. Down in tomb 621 was a scrap of king's (?) head-dress in diorite of the same quality as the rest; and the "pig-tail" in black granite from a king's statue, 11. The scale of this is apparently the same as that of the black granite finger. It is most likely that all these fragments were scattered from the chapel, as there is no other building or even tomb close by. The entire absence of red granite, so usual in royal buildings, is noteworthy.

On the east of the chapel was an area covered with sherds. It was thought that this was an offering place, like that due east of the pyramid temple; but the class of pottery was not the same, and it is more likely that this was only a rubbish heap, of workmen's pottery. Another but smaller patch lay close by on the south-west.

41. The purpose of this building is not known. Prof. Petrie has suggested that it was a chapel

similar to that built by Sankh-ka-ra on the plateau at Qurneh (PETRIE, *Qurneh* p. 4), in which he was worshipped after his deification at the Sed-festival. This seems the best explanation of the building. Like Sankh-ka-ra's, it was placed on the high ground in the neighbourhood; it was square, or nearly so, and apparently contained no pillars; it was also furnished with statues. There is no cenotaph of Senusert II known elsewhere to contradict this. But there is no sign of a sarcophagus; and most, if not all, the statues of which we have fragments were obviously not Osiride. It would be interesting to know whether there are foundation-deposits at Qurneh.

CHAPTER VII

THE WORKED FLINTS.

By FLINDERS PETRIE.

42. At the north-east corner of Cairo, where the Abbasiyeh tram is left in order to walk to the Gebel Ahmar, there are large gravel pits, worked for building sand. The sand is clean and coarse, with beds of large flints mixed with fossil wood. It has been laid by strong currents in shallow water, and has doubtless been washed down by heavy rainfall from the petrified forest which lies further above it in the desert. In walking over it picked up at once a large flint roughly trimmed on both sides, with a few bold flakings; much longer search by five of our party produced a few more, some barely attacked and three of them distinctly worked, nos. 61-63, pl. xxxviii, now in the British Museum. The surfaces are highly polished by sand wear in running water. The aspect of these, and the beds in which they are found, far above Nile level, point to their early age. The forms are like those of Norfolk Forest Bed flints.

43. On the desert surface north of the pyramid of Lahun, a few large flints were found of Chellean type, two with natural pebble butts, as no. 60, others flaked, leaving much of the pebble face, no. 58; or flaked all over, no. 59, deeply eroded by sand blast.

At about a third of a mile south-east of the pyramid of Lahun, on the present edge of the desert, is a station of small area with many worked flints of Mousterian aspect. When left there, the

Nile deposits were far lower, and probably the site was on the wide desert which ran down over the present Gebel Abusir, beneath what is now cultivated mud. Most of these flints are worked equally on both faces, nos. 1-38, while a small number are only worked on one face and have flat backs, nos. 39-54, pls. xxxvii, xxxviii.

They may be classed as follows. *Worked on both sides*: LANCEOLATE, A, lumpy; B, thin rough; C, fine outline; D, skew outline; NARROW, E, round butt; F, pointed butt; G skew; H, sloping butt. POINTED, K, massive; L, rough, thick; M, median; N, thin; SKEW, Q; OVAL, R; ROUND, S. *Worked on one side, flat back*: T, round; U, long pointed; V, ovate pointed; W, triangular. This deposit being closely of one period shows the variety of types which were used together.

44. A class of remarkably rough flints with zig-zag flaking, nos. 102-105, pl. xxxix, has been found in three localities at Lahun. Near the Mousterian station, north of it, is a low rise with many such flints, along with a great quantity of pieces of black quartzite hammerstones, and the ground thick with granite dust. This can only mean that the granite for the pyramid was worked here by hammer-dressing. The rough flints are mixed with this, but hardly any extend over to the Mousterian group. Then again, at the SW. part of Kahun, outside of the wall near the temple, a patch of flints of exactly the same class was found, thickly strewn over a space of about fifty feet; they extended scantily up the slope into a ground of granite dust and broken hammerstones. The areas of the flints and the hammers were contiguous, and stray examples were extended over both areas; yet the two areas were clearly not the same. The third site of such flints is south of the pyramid where stray examples occur, along with the mass of chips spread there by the pyramid builders.

Thus in each case these flints are connected with the work on the pyramid, and appear to have been left by the workmen. Yet they are totally different from anything known of the XIIth dynasty. They do not seem to have been used as hammer stones, the blows are too regularly zig-zag on the edge, and the main deposit is not with hammers or granite dust, but to one side. It seems as if they were the work of some barbarian captives—perhaps Sudanis—who were condemned to hammer the granite blocks into shape.

CHAPTER VIII

THE CEMETERY OF BASHKATIB.

By FLINDERS PETRIE.

45. THE farthest end of the Lahun cemetery, about three quarters of a mile south-west of the pyramid, borders on the cultivated entrance to the Fayum. As this end of the cemetery is much earlier than the rest, and is close to the station of Bashkatib, it is here named from that, to distinguish it. The light railway skirts the foot of the desert, looking down into the farthest graves. Other graves cut in the rock, mostly with chambers, extend from here on to the end of the dyke road; but they cannot be worked out as the rise of water level has flooded the lower part of the cemetery.

Though this cemetery is not extensive, only 104 graves being noted, and several of those entirely bare, it is yet important for its short period—of the first three dynasties,—and the variety of types of grave, giving every stage between the rough pit and the deep tomb shaft. It must not be supposed that all graves of one type are contemporary; on the contrary the forms of stone and pottery vases show that different types of grave continued to be made at the same time. We can only try to ascertain when each type came into use, and when it died out, treating the variants of graves like those of pottery. It is natural that the smaller and poorer graves should not have the deep rock-cutting and large door slabs of the richer graves. Yet we can here see plainly the gradual changes of type, developing little by little during the earliest dynasties, and thus retore the course of transformation up to the usual historic style of burial.

The chief types of tomb are outlined here in three plates of plans. The tombs are divided into four main classes, which are catalogued separately on pls. xlv, xlvi as Open graves, Shallow shaft tombs, Stair-way tombs, and Deep shaft tombs, the rise of each class being in this order.

In describing the successive types, reference is made here to the plans by letters, as on pls. xli to xliii, and to the burials of the same type by tomb numbers, as on pls. xlv, xlvi. All the burials of this age are contracted, usually closely; the attitude is denoted on pls. xlv, xlvi by the numbers in *Tarkhan II*, x.

Open graves.

46. The simplest type of burial is placing the contracted body in a rough pit, just large enough to hold it, as A on pl. xli, grave 752, which is photographed in pl. xlv, 1. This body has the skin and hair still preserved; and the attitude is so unusual that I solidified it with paraffin wax, and removed it whole; it is now in the Eugenics department, University College. The vase with it, Prehistoric Corpus P 95 A, is of S. D. 37-71. Another rough hole burial is no. 781, which is probably of the IIIrd dynasty or later, by the block head-rest found with it, see pl. lxix, 1. Another oval pit, but larger, 714, is dated by stone vases to late Ist or IInd dynasty.

The square pit, type B, was already familiar in the prehistoric age, as early as S. D. 41, and it was the most usual type here, supplying a fifth of the whole number. Those with burials preserved are 702, 703, 707, 733, 743, 795, 797, 810; other graves of the plain pit form are 706, 708, 730, 751, 753, 776, 788, 789, 798, 799, 813. 743 is of the late Ist or IInd dynasty; another tomb of that age, 709, has a great lengthening of the plain pit, to hold jars of offering. The bottom layer is of 149 jars, the next layer of 129, and on the top 48, a total of 326 jars; this was a mere matter of display, as the contents were not offerings but merely mud, ashes, or sand.

The use of a coffin of wood in a plain pit was a later type, C, probably beginning with dynastic times. Grave 705 is about the middle of the Ist dynasty, and 749 is late in the Ist or of the IInd dynasty. Others are nos. 724 (drawn as C) 782, 783, 793, 794, 800. In 780 is a modification where a coffin of bricks was built in the pit to hold the body.

The next stage, D, in no. 725, was placing a wall across a long pit, to form a separate chamber for the body. This followed on the abnormally long pit, 709, made to contain a great quantity of jars. The pit might be lengthened, as E, no. 732, to contain a great number of jars: also no. 757 of the Ist dynasty. This was followed by placing two walls across the pit, to divide different classes of offerings, as F, no. 726.

The most elaborate of the open-pit graves G, no. 710, had two walls, and a third dividing one of the sections, as in a grave at Tarkhan. This grave had a long offering jar of the IInd dynasty.

Thus the open pit grave, roofed over with sticks and brushwood (see *Tarkhan I*, xxiii D), which lasted through the prehistoric age, was expanded until it was inconsistent to make such a form when the rock-chamber had become usual, and it vanishes after the IInd dynasty. The form was the basis of all the royal tombs of the Ist and IInd dynasties, though they were elaborated by constructing wooden linings, which were made as massive wooden chambers as early as the reign of Zer.

Crocodile bones were found in three of these graves, 710, 726, and 732.

Shallow shaft tombs.

47. The next class of graves are the shallow shaft tombs. These begin in the later prehistoric by putting the body to one side of the pit, and stacking jars before it to protect it. The next obvious stage was hollowing out the side of the pit into a recess, putting the body in that, and placing a row of jars to cover the recess. This is a very usual type about S. D. 60 and onward, using the long jars, Late 30 G to S. The simplest form of this type at Bashkatib has a small recess on one side of the shaft, see H, tomb 812. The general place for cutting such graves is where a thin stratum of a foot or so of limestone covered a depth of marl. Cutting through the limestone for the shafts the workers then burrowed in the marl under a hard stone roof. This has often fallen in, and it needs care to distinguish a collapsed tomb from an open grave.

After the side recess type, H, the end recess, with the body put in end-ways was adopted, type J. The entrance was bricked up, and not closed with pots. An usual type is the end recess or chamber, with a side recess opening off the chamber, as type K, tomb 801. Sometimes one shaft had two chambers opening off different sides, as type L, tomb 715, and others near that on the west of the cemetery.

Stairway tombs.

48. In some of the previous classes there are the beginnings of the stairways and approaches. In what is otherwise a plain open pit, tomb 717, south of the cemetery, the pit is so deep that a sloping way, with one step, has been cut at the south end. In some shallow shaft tombs, as K 720, L 801, the shaft is narrower at the unused end

49. A further development was cutting grooves to hold the stone slab in place; sometimes merely perfunctory as in type S, tomb 821. Other tombs were more carefully fitted, with a fuller system for the chamber as type T, 734, where the body was in a coffin in the facing recess, and offerings in two side recesses. The grooves were later used merely to hold a brick walling, for which they are useless, as in type U 770. The later use of grooves is seen on a large scale in tomb 850, where they descend 20 feet from the surface, and in a great tomb at Demeshqin. They were usual at the end of the IIIrd dynasty at Meydum, as in the tomb of Rahetep, and the great tombs west of Sneferu's pyramid (*Meydum* xvii, xviii). Such grooves were left in the constructive lining of the rock tomb of Anpy, the chief architect of the XIIth dynasty, who kept up other archaisms.

The simplest form is type V with the body in the bottom of the shaft, walled off by bricks, no. 764. In 731 the body is in a wooden box coffin at a third down the shaft, but this is only a secondary burial (of the IIIrd dynasty, by the double pillar headrest), and the original plan was a chamber at the bottom on the east. A separate chamber for the body is type Y, no. 739, with a box coffin for the burial. The original plan only had the northern chamber; later a large chamber was cut on the west, which contained a body full length, perhaps of Roman age. Two chambers were original in type Z, no. 761. They are irregular owing to following the natural cleavage of the rock, skew to the shaft. Next, in type Aa no. 769, there are two chambers, one bricked off, with a box burial, and another burial in the pit, probably of a servant. The two chambers are sometimes on opposite sides of the pit, as type Ba, no. 735. Sometimes they are superposed, as in Ca, no. 736. The number of chambers opening from one shaft was in one case, four, type Da, no. 756, with a fifth chamber cut deeper again beneath the northern chamber, at a later time.

The Dating.

51. With regard to the dynastic dating of these classes of tombs, the vases of this age—pottery and stone—are well fixed by the Royal Tombs series, which give styles reign by reign. These served to date further the extensive series from the great cemetery of Tarkhan (see *Tarkhan I*, pp. 2, 3, 4). There is thus a firm basis for detailed dating, and we follow the system already laid down by taking Sequence Date 79 for Mena and Zer, 80 for Zet, 81 for Den, 82 for Semerkhet and Qa, and 83-85 for the IIInd dynasty. On extracting the sequence dates of the pottery and stone, they are found to be consistent. The open graves begin at 79 (no. 725), some may be of 80 (as 733 and 757) and fifteen others, dateable are of 81, or the middle of the Ist dynasty. The shallow shaft graves are only dateable in five instances; four of these are of 81, and one (768) of 82. The stairway tombs are dated in ten instances, one of 80 (no. 771), the rest of 81. The deep shafts are five of 81, and they last on to probably the beginning of the IIIrd dynasty, by the bowls with contracted brim, and the head rest of IIInd or IIIrd dynasty (no. 731). Thus though the origination of forms of burial successively one from another can be traced, yet each form continued to be made alongside of others; every class was made during the middle of the Ist dynasty, but some lasted on later than others. There is also another possibility not to be disregarded. The invading dynastic people may have been of various tribes with differing burial customs, and so different modes of burial may have been practised from ancestral influence. Any way the evidence of the stone and pottery vases seems to show that we cannot assume that the types of tomb were entirely successive, without overlapping; hence the type cannot be adopted as a means of relative dating.

In pl. xlv, 1, there is the remarkable body of a girl found isolated, about a foot below the surface in a small oval pit, no. 752. The rough brown pot with it has a wide range of date 40-70 S. D. or throughout the second prehistoric age. The lotus cup, xlv, 4, is of alabaster, surrounded with petals of alabaster and sepals of slate: it was in grave 743. One of the large open graves is shown, xlv, 5, no. 757, with rows of very rough jars containing mud along the south end, a long jar of Ist dynasty type, and fragments of alabaster, as scattered by the early plunderers.

CHAPTER IX

THE CEMETERIES IN GENERAL, AND EARLY TOMBS.

By G. BRUNTON.

52. THE desert both east and west of the pyramid was thoroughly searched during the three years of residence, and remains of all ages from Palaeolithic to Roman were found. Much pillaging had occurred, and there were very few discoveries of value, taken singly: but collectively the finds have proved of considerable interest.

East of Kahun, search was made as far as the coptic convent. Nothing was found except a few XII dyn. tombs just east of the town. Between Kahun and the pyramid are many tombs, all badly plundered. Close to Kahun is a large cemetery, apparently of Roman age which was ravaged, and not worth working. Further west in the wady which crosses the road, lay a group of shaft tombs of the Middle Kingdom, generally reused in the XII dyn. or Roman period, and mostly going down to water. On higher ground to the north-west we found a small group of XIIth dyn. tombs surrounding a small mastaba, which group, most unexpectedly, showed no signs of re-use, but had been very completely plundered. Between that and the pyramid are many tombs of the Middle Kingdom.

53. The finest tombs of this age were made in the high ridge "West Ridge" on the west of the pyramid, running from the group of Roman houses at the south end to Tomb 651 due north of the pyramid. Remains were found of several of the mastabas; but these tombs had been reused in the XVIIIth and again in the XXIIInd dynasty. Close to the end of the great dyke running out from the village of Lahun is another ridge pitted with tombs in great numbers and of all ages. There were signs of mastabas having existed on the highest points, but we did very little work here as the site was too much exhausted to yield results.

54. Close to the pyramid on the NE. were ten tombs of the XIIth dyn. all apparently unused: and another group on the SW. of possibly XXIIInd dyn., and if so the only original interments of that date. North and west are the great quarries from which the stone was extracted for the pyramid core.

55. Running along the edge of the cultivation, both east and west of the end of the dyke, are graves, mostly of proto-dynastic times, ending in the cemetery opposite Bashkatib, of the Ist to IIIrd dynasties. Between this and "West Ridge" lies "West Hill" with Middle Kingdom tombs, crowned by the mastaba of Anpy the architect of Senusert II. Another hill, further west, "Far West Hill" contained one huge shaft-tomb, 652.

56. A group of VI—IXth dynasty tombs was found opposite the village of Dameshqin; while at Kom-el-Iswid, some $3\frac{1}{2}$ miles from the pyramid, a number of fine XVIII dyn. shafts were cleared, with poor results. Here again there was no sign of re-use. Still further west, in the sides of a valley, we found a few IIIrd dyn. graves, which however gave no results.

57. The flints, of Palaeolithic, Neolithic and historic times occurring near the pyramid, are dealt with by Professor Petrie in Chapter VII.

One Prehistoric grave only was found in the whole site, no. 752 at Bashkatib, described in sect. 46.

The main Proto-dynastic cemetery was at Bashkatib and is described by Professor Petrie in Chapter VIII. On the west slopes of Dyke Ridge were a few graves of this age. N3 was a rough grave containing the body of a man, knees to chin, arms at right angles, wrapped in reeds and rope: no coffin or pottery. For details see General Register of tombs, pl. xlviii. N 5, a grave of Type Q (pl. xlii); the chamber had been bricked up, and a stone slab used also. A long stick was lying down the steps, and 10 of the dummy cylinder jars in limestone, generally associated with this type of tomb, had been thrown out on to the blocking slab. N 6 was of the early deep shaft type, well squared shaft, rough loculus. The pot 98 V, pl. liii, is probably of later date.

58. Other graves of the I—IIIrd dynasty were found just to the west of the dyke, but they had been re-used to such an extent, and reached the water level at such a small depth, that they yielded scraps only of early objects. Dyke I, $3\frac{1}{2}$ ft. deep, contained a contracted burial, head north, with a rough pot (pl. lii, 67 H), and scrap of fine red dish. Dyke 4, 5, 6 and 7 all had shafts widening to the north, like Type Q, pl. xlii, but without steps. No. 6, however, had a wide ledge at the south end of the shaft at 4 ft. down. No. 5 had a stone lintel over the bricked-up doorway. No. 4 contained part of a IIrd dyn. slate dish.

Further to the west we tried to work some pits, but all went down to water. In one was the alabaster vase pl. liv, 43 D: in another the alabaster pl. lxvi, 2; while from a third came part of a cylinder jar, of fine pinkish-buff pottery, of dynasty 0—1. This was the earliest dynastic object found at Lahun.

At the wady beyond Kom-el-Iswid a few scattered graves proved to be of the Old Kingdom. K. I. 8 had a chamber on the west, with a trench in it close to the north side. It runs east to west, and was evidently not made for a contracted burial. The pottery, mostly too broken to draw, was of Old Kingdom style. Part of a blue glaze cylinder bead was found, and an agate pebble. The flint flake is like those from the later deep shaft tombs at Bashkatib. K. I. 9 had a chamber on the west, but with its length running north and south. At the north end was a bench 5 in. above the floor, 26 in. deep and the full width of the chamber. The pottery is Old Kingdom, and includes a fragmentary "egg" pot like the type 64 K from, Bashkatib. The bricks are of the same age. A scrap of copper may be from a tool, as often found in IIIrd dyn. and later tombs. The steatite beads have the holes pierced from both ends, with a ridge left in the centre. K. I. 10, in the slope of a hill, consisted of one chamber $37 \times 72 \times 34$ with bricked entrance and a sloping approach. It contained the raised end of a wooden coffin lid, with a slot to take the end of the curved part, and scraps of fine red pottery bowls (?). K. I. 11 had a well-cut shaft $50 \times 68 \times 113$ with two rooms on W. and S. at different levels. Scraps of black burnished pottery and a solid rough limestone head-rest were all that was found.

59. The Dameshqin graves were of the late Old Kingdom or IXth dyn. age. For cemetery plan, see pl. xxiii. Only four contained anything at all. D. 1 had a sloping entrance, 19 ft. long, 4 ft. wide running south; there were 13 rough steps at the north end, total depth 15 ft. Two rooms on the south, the inner one south of the first and very roughly cut; the door-jambs have been plastered. The grooves for the blocking stones at the entrance from the shaft are 11×16 ins. and run right up to the surface. Only broken pottery was found, undrawable, but of well-known VI—IX dyn. types. D. 2 (plan pl. xxiii) had grooves for blocking stones, but no steps: the many chambers yielded some pottery beads, and model copper tools. The

pottery types given in the register refer to the pottery corpus of the VI—IXth dyn. in *Sedment*, in course of publication. The beads were all of the same distinct green glaze, the large hollow ball beads, and the "grass-hopper" spacers being remarkable (pl. lxiii). The set of tools (pl. xlvii, 12—17) are of a size intermediate between that of the IIIrd dyn. sets (pl. xlvii, 1—7) and the IXth dyn. types from *Sedment*. D. 3 was perhaps an unfinished shaft: in one corner close to the bottom lay the bones of a dog, which may have fallen in and died there. D. 4 in lower ground was a tomb of different type, with shallow shaft and a flight of narrow steps against the west wall. The pottery however was of VI—IX forms.

One other grave of this period no. 618 A was found near the pyramid. The details are all given on the register pl. xlviii. This was, like the many poor burials near *Sedment* with walking sticks, of the IXth dyn. or a little earlier.

CHAPTER X

MASTABAS OF THE XIIth DYNASTY.

By G. BRUNTON.

60. FROM the importance of the private tombs in the neighbourhood of the pyramid it was evident that high officials of the court had been buried there, as might have been expected; but so little remained of the original interments, that in most cases nothing was found of the XIIth dyn. except a little broken pottery; the name of the deceased only remained in two or three of the tombs. The wealthiest nobles selected the highest sites, and it was there we found the bases of the mastabas which we planned.

No. 620 was the most elaborate construction of this type that was found (plans and sections pl. xxvii photo, pl. xlv, 6, sculptures pls. xxviii to xxxi, 1—83). This was built by the Royal Architect ANPY who was "overseer of all the works of the king in the land to its boundary". The northern and highest part of a small hill some half a mile west of the pyramid was crowned with a large mastaba. This covered a system of four underground chambers, entered from two shafts, one vertical, one sloping. In the side of the hill, east of this, the funeral chapel was partly built and partly excavated, the rock faces being covered with blocks of fine white limestone, painted and

sculptured. This chapel consisted of a main portion, and an annex on the north. An entrance hall with a row of four square pillars led to the principal chamber, which had three recesses opening out of it on the west, and a niche in each of the north and south walls. The annexe contained two rooms, a larger and a smaller. In the first were the beginnings of a shaft, only a foot deep. There may have been other constructions, but all that remains is the excavation in the rock slope, and a few built blocks round the pillared hall. An astonishing feature was the huge shaft, some 9 × 24 feet, and 26 feet deep, immediately in front of the pillars. This led to nothing, and its purpose is not obvious. It can hardly have been made to prevent access to the chapel, where the family presumably went to make offerings: it is too large to have been intended to lead to proposed burial chambers: and one can hardly think it was intended to mislead robbers, as the actual tomb was in the expected position under the mastaba. The pit was open when the chapel was broken up, and practically all the pieces of sculptured limestone and of the statues were found in it, at varying depths, with scraps of the pottery near the bottom.

[It was obviously to hinder general access, the family using a bridge. F. P.]

61. The mastaba itself on the hill above had been almost entirely swept away: three courses of brick-work at the north and traces of foundation elsewhere, were the most that remained, and it needed careful examination to trace the outlines. The construction seems to have consisted of a rubble core, contained by a thick casing of brick-work: an outer covering of fine limestone was to be expected, but there was no sign of it: neither was any trace found of a peribolus wall, and such would have been almost impossible owing to the steep slope on each side. The proportions of the mastaba as planned are abnormal. The width is the same as that of mastaba 608 (pl. xxvii): and there is a possibility that it really extended to the same length towards the south, though the brick-work indicated the end here drawn. In that case the chapel would have been opposite the centre of the east face.

62. The entrance to the steep sloping passage (A.) leading to the sepulchre was probably covered by the mastaba mass, and the passage was therefore intended to facilitate the removal of broken rock when the chambers were originally cut. The

large shaft (B.) was used for the burial: the gable roofing to the chamber C being placed in position afterwards, and the shaft being finally bridged over with blocks near the surface. This would obviate the necessity of filling the entire shaft, and yet leave enough filling above the blocks to puzzle spoilers. The whole plan was carefully thought out to deceive would-be robbers. Having once arrived at the chamber C, they would probably have found it necessary to break through blocks in the S. wall to reach D. Under this, in a more or less usual way, was a burial chamber E, with a canopic recess F on the east. This would have appeared to be the place intended for the interment. But the walling on the N. hid the entrance to the actual sepulchre G, immediately under C, with the recess H on the east as usual. The sarcophagus was built up of plain limestone blocks, a few of which remain: the canopic chest was made in the same way. No remains whatever of the burial were found in the rooms, and we cannot prove that they were used. A few odd Middle Kingdom beads from the débris at the surface, described in the register, may have come from below; while a scrap of the finest lazuli inlay, picked up in the sand some little distance away, shows at any rate that valuable objects had been buried in the vicinity. The oblong cutting in the rock west of the sloping entrance, and shown in the plan, was probably a XIIIth dyn. grave; beads of that date were mixed up with the débris close by.

63. The only remains of the chapel building *in situ*, are the paving slabs of the hall, the four pillar-bases, and the first course of the fine limestone walling on the three sides (with ebony dovetail cramps in position), as shown in the photograph pl. xlv, 6. This was all painted black, except the door jambs, which were red with green mottling to imitate granite.

64. Professor Petrie has arranged the scraps of sculpture in the plates to show as far as possible how the scenes, were placed. No. 1. is a piece of the main architrave, 19.3 ins. in height apparently, which was supported by the pillars. It shows the ceiling pattern, of either the hall or the inner room. Sculpture from various doorways could be sorted out: 25—33 from the main door, as the ground colour is yellow or red, and the borders imitate granite: 17—24, ground yellow, and 15, 16, ground red, with small hieroglyphs came from entrances

to the statue recesses, or doorways in the annexe,—probably the former. 2—14 scraps, with the largest size of hieroglyphs, must belong to the architrave or pillars. All these hieroglyphs are coloured green. Of the actual scenes in the hall little can be conjectured. Block 57 shows the legs of a large seated figure, with the leg of the chair behind them: 80 is part of the mat below: 82 is part of a large fowling scene: 77 in sunk relief is the forepart of a bull, roped: 73, 75, 78, 79, being in relief, also must have come from here, as did probably 76, part of fire-altars, perhaps, like those at Hawara (*Labyrinth*, pl. xxviii).

The inner chamber walls were covered with lists of offerings of which many fragments turned up, 34—56, all coloured green on white. 58—71 are fragmentary bands of inscription in front of rows of Anpy's children or relatives. One is named Sehetep-ab-ra-ankh, who held an appointment connected with a "pyramid-city" Senusert-Qebh: another is Anpy-senb, connected with the town, Senusert-hetep (Kahun). If Sehetep-ab-ra-ankh was named after Amenemhat I during the king's life-time, he must have been over 70 years old at the beginning of Senusert II's reign, and his father therefore getting on for 90, which is most unlikely. He may therefore have been a brother or uncle. 36 gives the most complete list of Anpy's titles. His name and titles also occur on a stela found at Kahun (*Illahun*, xii, 11 and *Kahun* xi. 10).

65. Fragments of two small statues of Anpy were found, both unfortunately without the head. One, of very hard yellow limestone, represented him squatting, one knee up, with a roll giving the funeral formula, and described him rather surprisingly as a "devotee" of Seneferu, pl. xxxi, 74. This statue is of the finest work, the toes of the up-turned foot being rendered in a masterly way. The other statuette was of black granite, seated with a ribbed kilt, and Anpy's name on the belt. Probably these two came from two of the three large recesses: a wooden statue may have occupied the third. Scraps of red granite found indicate some construction in that material.

The pottery of usual XIIth dyn. types is sufficiently referred to in the Register. Two of the cylinders found so commonly at Kahun (*Kahun* xiv, 14), but rarely in tombs, were lying in the offering chamber behind the portico. A quartzite model corn-grinder suggests that there were foundation-deposits, as we found a similar one at mastaba 618,

though not actually in the undisturbed corner-pits. Ox(?) bones were also discovered. The later burials, chiefly of the XXIIInd dyn., were packed into the *débris* of the chapel and mastaba; the details are given in the Register under 620.

66. No. 608 was at first a puzzle. On a slight rise in the plain just north of the Dyke Ridge, and on the way to the pyramid we found in 1914 a wide sloping descent ending in a large chamber, open to the sky, 16½ ft. deep, with a bench at the south end, and a wide shallow recess on the east. This, which we called "the Dromos," contained nothing except remains of XXIIInd dyn. burials. There the matter rested until in 1921 it was noticed that there were two or three scraps of red granite lying about in the surface *débris*. On clearing the surface to the east of the sloping excavation, a shallow wide trench was seen in the rock. This was traced along the whole of the east side, half the north and south, and in the centre on the west. One block of limestone remained in position with clean sand under it, and it was evident that we had found the foundation-trench of the stone casing of a mastaba as large as Anpy's (plan pl. xxvii, sculptures pl. xxxvi). The pit is too large to span, and must have contained cross-walls of masonry or pillars. It will be seen that the beginning of the sloping way is *outside* the casing. As the hill was too small for the building desired, the slopes were levelled with chips, held up by wavy walls of brick, as shown in the plan. The destruction was so complete however that we cannot say whether there was a chapel or not. Neither could we find any vestige of an enclosure wall. We searched in all directions for a more usual shaft and burial chambers, but only found the small pit on the south-west shown in the plan, which led to a room on the south with two narrow burial chambers, one with canopic recess on the east. These were completely robbed, a kohl-pot and pottery scraps being all that was found (see Register). In the *débris* on the east side of the mastaba were many small inscribed and sculptured chips, and one block with fine large hieroglyphs, 9½ ins. high, doubtless from the mastaba-face (pl. xxxvi, 13). The scraps, 14-53, may all have come from a large stele, some 6 feet high, judging from the scale of the figures, one of which is ⅔ life size. There are three sizes of hieroglyphs, and one trace of offerings, 42, the eye of an ox(?). A stele of these dimensions might have been placed in the recess on the east side of the underground-chamber.

A piece of the cornice, 16, and of the torus-roll, 15, were also found. A well-preserved wooden cramp, 14½ ins. long, lay in the rubble at the south end. It exactly fills the socket in the remaining block of the Queen's pyramid, and it may be concluded that this was a standard size at the time. The bricks *in situ* measured 14¼ × 7⅞ × 3½ while others found loose were larger, 17 × 8½ × 4 ins. Low down in the foundations were some pieces of twisted leather rope, a wooden mallet, scales and the anal fin of a teleostean, probably *Lates Niloticus* (from a workman's dinner?), and part of a hieratic papyrus. M. Golénischeff, who very kindly examined this for me, says it is a usual form of XIIth dyn. letter, but too fragmentary and illegible to give any connected sense. In one of the little pits shown on the plan was a collection of pieces of hammer-stones. For the XXIIInd dyn. intrusive burials see Register.

Probably several mastabas were built on the top of the Dyke Ridge, judging from the fine white limestone chips to be seen there. But the destruction was so complete that it seemed useless to try for plans. One tomb was examined, no. 654, on the highest point. It had been used again in the XVIIIth and XXIIInd dyns., and nothing remained of the first burial. A steeply sloping passage, 21 ft. long, led to a horizontal passage of 13 ft. running south into a single large chamber, with a shallow recess in the south wall. In the centre was a pit lined with limestone slabs divided into two parts by a built wall containing two doorways. The western part 51 × 103 × 60 was for the sarcophagus or coffin: the eastern 36 × 76 × 70 had perhaps been originally divided into a canopic recess (s) and an offering chamber (n), but the cross-wall had vanished. The doors were 10 ins. and 17 ins. wide and 31 ins. and 25 ins. high respectively. The room itself was filled with the *débris* of the later burials, see Register. The finest object from here is the scarab (pl. lxiii, 12) mounted in chased electrum and set in a gold ring.

67. Nearer the pyramid, along the West Ridge, several other mastabas had been built. No. 609, situated on a southern slope, resembled in construction the pyramid-mastabas. The rock had been quarried away to a certain level, leaving a rough core for the mastaba, and a scarp-face on the north and west. For plan see pl. xxxviiA, sculptures pl. xxxiv, 10-38. The core was cased with fine limestone blocks, sculptured with a band of huge hieroglyphs, 9½ ins. high, running right round, apparently, as pieces were found on both east and

west. There was no trench cut in the rock to take the casing, as in the royal mastaba, no. 4. Closely surrounding this was a panelled brick wall with double and single buttresses as shown both on the plan and in elevation. On the north it formed a facing to the rock scarp, and must have partly covered the shaft the north side of which is flush with the scarp. There was an entrance on the east. The limestone sill was found in position, with the hole for the door pivot, and the channel for inserting it. Near this was a curious brickwork channel, the object of which is not obvious. Outside the wall, in the N.W. angle of the scarp was a little enclosure of brick; it contained nothing. Besides the inscribed blocks of frieze we found a few scraps with smaller hieroglyphs, 18, 19, 29, 31, 35, 37, from the stele(?), 30 the cornice of a stele, and pieces of torus-roll. In 29 under the offerings are the signs *n Hor.*, and part of a sign, repeated in 31. Probably this is the owner's title "*udeb* of Horus" as in 18. The pit which is only 20 ft. deep, led to an irregularly shaped room, roughly cut. It is so out of keeping with the superstructure that it looks as if the owner had died before the burial-chambers could be properly made. There is a ledge on the west side, and two pairs of holes, a foot square in the east and west walls, probably used for beam-ends when the sarcophagus was lowered into the trench, which is in the west half of the room, and measures 60×125×70. The coffin was probably placed in a stone sarcophagus, as we found a lump of pitch or bitumen giving the cast of the inside at one corner, and also the cast of part of the head of an anthropoid coffin, with head-dress painted in stripes of blue and gold. The pitch had been poured into the sarcophagus after the burial in order to protect it. Some gold-leaf and resin found in the chamber may have come from this, as no doubt did a blue felspar collar-head and the wooden hawk-headed handle of a model dagger. This was gilt, the hair painted on the gold in blue stripes; the eyes are of garnet. The pottery is listed in the Register, where are also given the details of the many burials of later date found in the same chamber.

68. Mastaba 601, due west of 609, was generally similar (plan pl. xxxvii, and scraps of inscription pl. xxxiv, 2-7). Nothing of the stonework or brickwork remained: in fact it may be questioned whether it was ever built, and whether the inscribed fragments had not strayed from elsewhere. The little brick-pillars, &c., near the north scarp, shown

in the plan, are unexplained. The shafts and tomb-chambers in the vicinity are unusual. To the south-east is a shaft which leads to a long passage running north, eventually turning west and connecting with the burial-chambers by a rough hole. The proper entrance was by a shaft to the north-east, and down a passage to the south, partly sloping and partly horizontal. The chamber has a trench in the west part with a sloping floor, and this leads into another room to the north, with a sarcophagus-pit in the floor, roofed with limestone blocks, but without recesses. None of these rooms is under the mastaba: and the purpose of the south-east shaft is not clear. For the pottery of the XIIth dyn. and for details of later burials see Register.

Inside the scarp of 601 on the south-west was another pit, 48 ft. deep, opening out at the bottom into seven narrow rooms, badly cut in rotten rock, two on the east, two on the south, two on the west, and one on the north. They contained some XIIth dyn. pottery and some late scraps. See Register.

No. 606 close by was an unfinished shaft, 8 feet deep, showing the rough boss of rock in the centre at the bottom. In it were a quantity of fragments of large jars, 67F; over ten were counted, and there were probably many more. Some had marks on the rim, pl. liii, 3-6. It was evidently used as a pottery dump when the cemetery was tidied up from time to time.

69. The next mastaba to the north along the ridge was 607 (plan pl. xxxviii, sculpture pl. xxxiv). This yielded very little but the plan. The ground surface being badly compacted gravel, and not rock, the foundations were made with rough stone blocks. The lines on the west indicate the position of the casing. A pit at the south-east corner may have been for a foundation deposit, but no other pits could be found, the gravel having been entirely churned up. Parts of the brick enclosure wall were traced, not apparently panelled. The only piece of sculpture recovered was the fire-altar pl. xxxiv, 9. The shaft is on the north. From it a short sloping passage leads to a room on the south containing an oblong pit. This leads to another long room on the south, with a small chamber on the east, and sarcophagus-pit at the south end. Out of the pit the offering and canopic recesses open in the usual way. The main chamber has the usual pairs of holes for beam-ends in the east and west walls. No XIIth dyn. pottery remained; but a couple of

beads turned up, part of a fine green felspar barrel, and a carnelian cylinder. A little rough limestone stamp with the name of the goddess Usert came from the foundations at the surface, pl. lxiii, 1. For late burials see Register.

Scraps of inscribed limestone were found lying near "Kiln" tomb, and in the shaft of 626 near the south end of the ridge (pl. xxxiv, 39-41). They may have come from the breaking up of another mastaba, which we did not find, or from 609. But it was quite evident that only a few of the principal tombs had mastabas; and it may be that these were used jointly by members of the same family buried in the vicinity.

70. North of 607 comes the long gap which is quite bare of tombs, referred to previously. The only other mastaba on the ridge is 618 far to the north, plan pl. xxvii. This was a small one, the core partly or entirely of brick. On the east are a few blocks of foundation, showing that there had been a stone casing, though nothing remained of this. A casing was also indicated by the presence of two little foundation deposits in pits beyond the brickwork at the south-east and south-west corners. We searched carefully for the other two but they were not to be found.

The south-east pit, only $6\frac{1}{2}$ ins. deep, contained 4 model baskets (pl. xxv A, 11, 12), 4 tiny reed trays (pl. xxv A, 7), 2 model hoes of roughish wood, and 2 square pieces of wood. The south-west pit appears to have been plastered over. The sand in which the objects were buried was partly discoloured grey. It contained a little pottery dish with charcoal in it, a model basket and 2 hoes, 4 sticks about 4 ins. long, and 9 squares of wood, apparently pieces of a box. These objects differ in all respects from the royal foundation deposits, except in the matter of the reed trays. A model corn-grinder of quartzite was lying in the rubbish on the west side of the foundations. It may have come from another little pit which has disappeared.

The pit and burial-chambers are shown in plan and section, and do not call for much comment. The sarcophagus pit and canopic recess had been lined and roofed with limestone slabs. The whole of the inner room still retained its limestone lining and barrel roof. Perhaps it had not been so much pillaged as others owing to its distance from the cultivation. These limestone walls had been covered with a very thin layer of stucco. One scrap on the south wall still remained, and on it were the hiero-

glyphs, coloured brown, given on pl. xxvii. Among these the name Senusert appears, proving they are contemporary with the tomb. This is the only case where we found an inscribed wall in a tomb, either private or royal: but it suggests that many were originally covered with inscriptions on plaster, which has fallen off. The Middle Kingdom pottery, and details of the later burials, are given in the Register.

One other mastaba was discovered near Kahun, no. 905. There was no sign at all of any superstructure connected with other tombs of this group (cemetery, plan pl. xiii), and it is probable that the one belonging to the head of the family served for the whole. It was of small dimensions, being only 19 ft. long. The core was of brick, or rubble and brick, and it was cased with limestone, resting in a shallow trench cut in the hard gravel. Size of bricks $15\frac{1}{2} \times 8 \times 4\frac{1}{2}$ ins. A much deeper and narrower trench was cut nearly all round the mastaba. Opposite the centre of the east face, this trench ran into a square pit about 3 ft. deep. The reason for this is not apparent. A few pieces of inscribed frieze, &c., turned up (pl. xxxvi, 2, 4-12), and a scrap of the stele cornice (3). No. 5 gives the private name Senusert...., perhaps that of the deceased. The small size of this mastaba combined with the fine quality of the interment suggests that the building of a mastaba was a very costly business, or else that Senusert.... only planned it on a small scale because he started it late in life.

Underneath was the burial chamber approached from a shaft 26 ft. deep on the north, and an entrance chamber. This had wide ledges, one each side. The central part, as wide as the door, sloped down steeply, floored with limestone slabs laid on sand and chips. The sarcophagus itself was built up of single slabs, $5\frac{1}{2}$ ins. thick, the curved lid with raised ends being also one block. Inside measurement of sarcophagus $32 \times 86 \times 37$ ins. The canopic chamber on the east was lined with limestone. Of the burial itself we found the skull, a very fine type of male, advanced in years. The canopic vases were of thick alabaster. One was found in fragments scattered all over the tomb. Two of the heads were lying by the sarcophagus, both beardless. The hair is painted blue, and the eyes black, with red in the corners. The drawings show the excellent quality of the work (pl. lxvii, 47, 48: lxix, 14, 15). The jar is uninscribed except for the name Qebhsennuf painted in red. A few beads came from the sifting of the rubbish, part

of the flail, collar, and necklaces. A wooden staff-head and a model copper chisel are shown in pl. lxvii, 49, 60. A little pottery remained. One large jar, type 370, still retained its mud sealing, with thumb mark (lxvii, 59). I have to thank Mr. A. Lucas, the Government analyst at Cairo, for examining the pinkish sediment remaining inside. He states it to consist of "unburnt clay: the white particles are chiefly common salt with a little sulphate and a little lime; the reddish particles are oxide of iron." The types of beads and pottery are given in the Register.

CHAPTER XI

TOMBS OF THE XIIth DYNASTY.

By G. BRUNTON.

71. THE mastabas having been described, a few of the other principal Middle Kingdom tombs may now be mentioned, beginning with cemetery 900, which formed a compact group. 906 was much like 905 in plan, but had no slope in the entrance-room, only an oblong well leading to the sarcophagus-chamber. This and the canopic recess were lined with slabs. In the west wall of the first room was a shallow recess 34 ins. high evidently for a stele, as the fine altar of offerings (pl. xxxvi, 1) had been placed on the ledge in front of it. This was made for Khenems-khred, who was "born of the *nebt-per* Ab" and also "born of the *nebt-per* Nefert." It is curious to find a woman using two names in this way, though double names were not uncommon. The dedication is to Osiris on the right, and Geb on the left (written unusually with the bag sign). From the bones found we know that Khenems-khred was a lad of about 18 years old. Scraps of gold leaf, staff, and the much decayed head of his little wooden ka-figure, also large plaster ears, and a coffin eye (obsidian), show the usual character of the burial. Pieces of a plaster mask were found. These painted plaster masks were in general use at the time, judging from their occurring in several tombs. An object, otherwise unknown to me, was the model canopic box of limestone painted red, pl. lxix, 13. The pottery (see Register) included sherds containing white wash or plaster, evidently left there when the construction was finished. A few beads were found. The chamber entrance from the shaft had been bricked up (bricks $10\frac{1}{4} \times 5\frac{1}{8} \times 3\frac{1}{2}$) and the shaft

itself contained much of its original filling of chips, the robbers tracks being filled up with wind blown sand.

72. Several shafts of this group were unfinished, e. g. 902, 909, and 911. 904 was practically completed, but never used. The linings to the sarcophagus chamber and canopic recess were all in position, and even the two large blocks for closing the entrance lay ready for use in the outer room. Scattered about were half wine-jars used for the whitewashing. The whole was filled with clean sand, and nothing whatever was found in it.

In 913 we found one beautifully cut fluted drop-bead of blue felspar 70 G₂. A reward was offered for every single other bead found of this quality, without result.

73. Of the tombs in the wady only one, 107, is worthy of note. This was another case of the filling up of the sarcophagus pit after the burial had been placed in it. Here the material used was plaster, and many pieces were found showing casts of the bands of inscription on the coffin. See pl. xxxv. A piece of cornice from the stele also remained; it was painted in bands of blue and red.

74. The principal tombs on the West Ridge remaining to be described are 602, 603, 610, 650, 651 running from south to the far north.

The shaft of 602 lay almost east and west, and a passage opened from it on the east. This led to a room with a north and south pit in it, connecting with the sarcophagus chamber at a lower level. The chamber itself, and the canopic recess on the east, were lined with finely worked limestone slabs; but the offering-chamber, as so often, was left rough. For plan see pl. xxxiv. The burial-chambers were quite clean, and nothing of XIIth dynasty date was found except a piece of black granite with royal titles on two faces at right angles to each other, possibly part of an offering-table. This seems to have strayed from one of the royal buildings close by. The outer chambers contained the remains of many later burials, with which were the glazed figures of pl. 1, top right hand quarter, and the shells and iron weapons, lower left hand quarter (see sect. 90).

75. Tomb 603 (plan pl. xxxviA) is of the "doubling-back" type with the sepulchral chamber entered from the south, although all the four chambers lie south of the shaft. The walls are all left in the rough, and the angles are still only rounded off, both of the room itself and of the sarcophagus-pit

in the centre. It was obviously in course of construction, and abandoned. No limestone blocks were found, and not even any pottery, of the pyramid period. In the third chamber are the usual two pairs of little square recesses in the east and west walls (shown in the plan), over the central pit, for the beam-ends. Trial pieces were found here, see pl. xxxii, excepting the first such. Also glazed figures shown on pl. 1, up left hand quarter, and scarabs and amulets at lower right hand (sect. 90).

76. Tomb 610 consisted of one room only, on the south of the shaft with a trench on the west side for the burial. The arrangement is identical with that of 609: the shaft is of the same dimensions: the room is smaller and the trench considerably less.

The tomb which we called the "Kiln" tomb (plan pl. xxxviiA) lay almost in the plain, east of 603. At the surface were remains of a brick pottery-kiln with fragments of Roman pottery. Faint traces of a brick wall, and limestone chips suggested the possibility of a mastaba. A few inscribed fragments, however, may have wandered down from the higher levels. One had feet, another an arm, another the cakes from an offering-table. The shaft was well cut with foot-holds down the north-west corner. At the level of the door were two vertical grooves, 14 ins. long, 5 ins. wide, cut in the east and west walls of the shaft, close to the north end. Similar grooves were seen elsewhere, and I do not know their object. The passage and chambers were well cut with good flat surfaces. The passage had a gable roof and recess on the east (for stele?). The rooms all had the barrel roofs which are characteristic of the period. The burial chamber had limestone slabs let in to the lower part of the walls where the rock was bad, and was paved with blocks, 6 ins. thick, laid on clean sand.

77. No. 650 at the north end of the West Ridge was simple in plan (pl. xxxviiA), with one room and a short entrance passage. On the east side of this was a bench, 3 ft. high and 1 ft. wide. At its end was a recess in the wall, 21 ins. deep, 41 ins. wide, and 3 ft. high. A very simple, uninscribed altar of offerings lay on the floor just in front, having only 2 spouted *hes*-vases, 2 round cakes, and the *hetep*-vase sculptured on it. It measured 29 × 25 ins., 12 ins. thick, and had no doubt been placed on the bench partly in the recess, which had once contained the stele. A little pottery of the XIIth dyn. was all else that remained in the tomb, except the inevitable late burials.

78. No. 651 was near 650. For plan see pl. xxxviiA. This tomb was of the simple type, with the burial-pit in the second chamber in line with the entrance. The ceilings were vaulted as usual. A curious feature was the little oblong recess in the west wall of the entrance chamber, which had been walled up with two carefully fitted stones, and plastered. One stone still remains in position. The rock is good, and this is not a patching. The fine quality of the rock explains why the sarcophagus-pit and canopic recess were not lined, and only roofed over with limestone slabs. The large recess half-way up the south wall is unusual, and must have been for offerings. No remains of the XIIth dyn. were found, but the group which gives us a dating point for the XXIIInd dynasty objects comes from here.

79. A noticeable feature of the landscape is the isolated knoll of rock, which we called "the Dome," between the Dyke and West Ridges. A shaft just to the north of it had been standing open for years, and was not attractive. We worked all round the rock, but it was obvious that it had never been used as a mastaba or pyramid, and limestone chips were entirely absent. The short shaft leads to a long sloping passage running under the knoll. The plan, shortly, consists of a square room with a large trench in the western part, and a smaller (late?) one in the eastern. The west trench leads to a narrow sarcophagus-chamber, while a second room (made later?) with a small trench runs south from the eastern part. Before reaching the room the floor of the sloping passage drops abruptly about 4 feet, forming another pit or trench. The rock is the poorest marly limestone, badly fallen away everywhere, and it is impossible to say what features of the plan are early or late. It had been used in the XIIth, XVIIIth, and XXIIInd dynasties.

From the excavators' point of view nothing could be more unprofitable; several days were spent in a thorough clearance, and nothing remained to be done but clean out of the bottom of the shaft, generally a matter only of routine. In this case, however, we found, most unexpectedly, a small secondary shaft, some 3 ft. square, going down for 8 ft. or so. This led to a large room on the north, with four parallel loculi running out of it, side by side, on the north. The first, third and fourth loculi were stacked with burials of the XXIIInd dynasty, mostly untouched. The second loculus, to our great surprise, contained a rectangular wooden coffin, with lines of blue hieroglyphs, of regular Middle

Kingdom style. It was extraordinary to see this untouched coffin surrounded by the welter of later burials; and it seemed as if this must be an archaistic burial of later times, especially considering the secondary nature of the shaft and its small square form. But between the coffin and the wall was a pot of regular XIIth dyn. type 38 N₄, and there could therefore be no possible doubt of the age. This was the only complete Middle Kingdom burial found at Lahun. Of course it contained nothing of value. The coffin was in excellent condition at the top; but the lower parts had rotted badly, from storm-water soaking down the shaft. We very carefully removed the heavy lid, and looked inside. All that we saw were the two skeletons, a man and a woman, side by side, heads north, extended and supine, the man on the east. The bones were quite clean, without signs of any mummification, and over them lay a few wisps of carbonised linen. Not a bead or ornament of any kind was to be found. Considering the size of the shaft, the bodies, which were fully extended and in position in the coffin, must have been lowered and placed in position, in the tomb. The inscriptions give us the name of the man, Ankh-mesu, and his title *iri 't*. The size of the coffin was $76 \times 20\frac{1}{2}$ ins. exterior, height 22 ins. + decayed floor + $2\frac{1}{2}$ ins. lid. Thickness of wood, ends and lid $2\frac{1}{2}$ ins., sides 2.3 ins. Corners, concealed mitre joining, fastened with round pegs. Lid made up of 2 long and 3 short pieces, joined by flat tenons. The lid was fastened down by pegs driven through the south end of the coffin into a cross-bar under the lid. The inscriptions ran in horizontal and vertical bands, which were outlined by red lines. The paint has largely fallen off. The horizontal bands give the usual *nyswt dy htp* formula to Anubis on the west side and Osiris on the east, with the name of Ankh-mesu, devoted to Nephthys on the north and Isis(?) on the south. The two vertical columns at the north and south ends name Ankh-mesu devoted to Nut and the Ennead of the Gods; the four vertical columns on the west, beginning from the north, give the names of (1) Shu(?), (2) Tef[nut], (3) and (4) illegible; the east side has Imsthy in (1), to the south; the other three are illegible.

80. A curious little tomb lay near 608, just across the depression on the west. This was 653. It consisted of a shaft only 8 ft. deep with a small room on the south. Beads, pieces of wood, and a skull belonged to late burials. An obsidian pupil from

a coffin-eye, and pottery of types given in the Register, belonged to the XIIth dyn. The pottery is of dark red-brown, almost plum-colour, which was unusual. The most surprising find here was the exquisite turquoise scarab, pl. lxiii, 5, uninscribed, as the stone scarabs so generally are, but cut in the finest possible style. Prof. Petrie considers that it must have been robbed from a royal burial, or it might have come from the original burial at mastaba 608, which must have been of a prince or wealthy noble.

81. The only other tomb of the regular XIIth dyn. type which is noticeable in any way is 652, situated far out to the west, and quite isolated from any other tombs. The shaft was sunk in rock which was very crumbly near the surface, and which had broken away all round, forming a huge funnel. It was of unusual size, 5×10 ft., and descended for 41 ft. The emptying of this occupied the best part of 5 days. At the bottom on the south was a surprisingly poor and roughly cut room, its east wall flush with the shaft. A few scraps of late burials, some pieces of XIIth dyn. pottery, and a modern candle-end told their melancholy tale. The interest however lay in the floor of the shaft which was entirely paved with stone blocks. It seemed that the original burial might still be found intact beneath. The stones were removed. Another course of masonry was seen beneath. Under this, a shallow layer of chips, and then bare rock. Why the floor of the shaft should have been so carefully paved is not evident.

The little group of 10 tombs, 50-59, situated in 2 rows at the bottom of a hollow, were not all finished, and in no case used. They were all filled with clean sand, which had been compacted with storm-water, and set hard. Workmen's *débris*, broken pots, sherds with red and yellow paint, a cylinder of Senusert III (lxiii, 10) and a rough limestone seal (lxiii, 2) had been thrown down the shafts. In 52 the upper portion of a body with green-glaze collar-beads and pieces of wooden staves found half-way down the shaft, could hardly have come from the chamber, but were rather thrown down the empty shaft by tomb robbers.

82. A tomb which may be of the XIth or early XIIth dynasty was found in the south-east slope of West Hill near the Anpy tomb. This was N 17. A sloping passage, $3\frac{1}{2}$ ft. wide, 11 ft. long, led north from the surface into a rock-cut chamber with a second room leading out on the west. At

the back of the first room a small square shaft, 8 ft. deep, connected with three other rooms on three sides. The upper rooms were a chaos of *débris* and rubbish, including the remains of various animals, lizards, porcupines, &c., which had used it as a refuge.

The burial remains were all of the early part of the Middle Kingdom, and the tomb, quite exceptionally, had not been re-used. Beads of many kinds were found: garnet, carnelian, amethyst and blue-glaze balls; electrum-plated balls; a carnelian hawk; an amethyst fly; and green-glaze collar-beads and spacers. The wooden base of a statuette was inscribed with a dedication for a certain Thy, pl. xlvii, 19.

The interest of the place lay in the many fragments of models which were lying about. These consisted of portions of a boat or boats, a hawk-headed standard, figures of rowers, pieces of oars, servants, various offerings, &c. A pretty little object was a model flail, made of a stick from the end of which hung three little strings of the tiniest lazuli, carnelian and felspar beads. It is important to notice that in no other tomb at Lahun did we find the smallest fragment of the well-known models so common in the IXth–XIth dynasties, and also in the earlier part of the XIIth dynasty, as for instance those found in the tomb of the nomarch Tehutihetep at El Bersheh. Their complete absence shows that a distinct change of the custom in this respect must have taken place somewhere about the reign of Amenemhat II. It was also at this time that the new royal facial type is seen, that we first find the title *khnumt-nefer-hezt*, and that there were radical changes in the administration, according to Professor NEWBERRY (*A Short History*, p. 58).

83. Taking the tomb-plans together, one or two points emerge. The general idea seems to have been to make as many chambers, (up to four, usually,) as time and means would allow. The entrance-passage, sloping in the earlier(?) examples, level afterwards, and of very varying lengths, would lead southwards to a room or two. In the western portion a pit or trench would be sunk for the burial, and this again used to approach the final sepulchral chamber on the doubling-back principle. In the case of Anpy's tomb it doubled under the entrance room instead of to the west. The tombs with the narrow loculi for coffins show a different principle. In cemetery 900 the best type of tomb had the burial chamber at the same lower level, but straight ahead, and never

doubled back. This was also the case in 654, on the best point near the cultivation, and I think it was the earlier type. In the cases where we found offering-tables there was generally a stele-recess; and where we found stele-recesses, there was generally no mastaba. The examples are too few, however, to form a firm basis for theories, but it may be that the stele was placed below when there was no chapel at the surface.

Another point which seems evident is that when Senusert II died after reigning 19 years only, Lahun ceased to be the burial-place of the court. We know that Senusert III's pyramid was at Dahshur, and his courtiers were doubtless buried round it. The number of unfinished and apparently unoccupied tombs at Lahun, both royal and private, bears evidence of this. A cylinder of Senusert III was dropped down the shaft of tomb 57 close to the pyramid, presumably by the workmen, but nothing else with his name occurred in the cemetery. At Kahun we know of a statue of him in the temple (A. Z. xxxvii, 91), and a sealing (lxiv, 210), but no papyri found at Kahun are dated in his reign (*Hieratic Papyri from Kahun*, Text p. 85). It may be taken for granted that the tombs at Hawara are of the reign of Amenemhat III; and it seems probable that all the Lahun XIIth dyn. burials may be dated to the reign of Senusert II, with the one certain and notable exception of Princess Sat-hathor-Ant. (See *Lahun I*.)

Tomb 621, prepared for a queen, shows no sign whatever of having been used.

CHAPTER XII

THE NEW KINGDOM AND LATER BURIALS.

By GUY BRENTON.

84. OF the XVIIIth dyn. there were very few tombs at Lahun. In a few cases some odds and ends showed that a Middle Kingdom tomb had been re-used at this time. Tombs 601, 620, 654, and Dome, are cases in point, sufficiently referred to in the Register.

Two undisturbed burials however of this time were found in unexpected places. One was in the chips of the west quarry near the pyramid; the other was at Kahun. The first (no. 5) was cleared by Prof. Petrie. Its position in the quarry is shown on pl. xiii. The coffin itself was of solid wood, plain, and in excellent condition, with curved lid and raised ends. At the head and feet was a quantity

of pottery, 12 pieces in all, of the types 2 B, 2 Y, 3 C, 3 E, 9 B₂, 9 F, 26 Z₂, 26 Z₃. One of the 3 E contained figs, and 9 B₂ grapes. Inside the coffin was the body of a woman, head west, wrapped in one long linen shroud twisted up tightly above the head. The two flasks of fine red ware 92 M, 92 P and the two black jugs 91 Q, 91 Q₂ were laid round the head. In the north-west corner was a small basket containing the alabaster kohl-pot, obsidian kohl-stick, and ivory hair-pin. (See pl. lv, 1, 2, 3. Some of the pottery is shown with this group on pl. lv.)

85. [The only important burial found at Kahun in 1920 was in the grave marked K 1-5 (the numbers of the bodies), lying with length from north to south. The open grave was 82 × 27 and 57 deep. On the west was a recess the whole length of 82, bricked up with bricks 14 × 6 × 3. The depth back of the recess was 29, leaving 23 clear inside the bricks. In the recess was a coffin, with square block ends to lid, rudely painted. On the coffin at the north-west corner was a long jar, 25 I, and flat pan, 3 C₂. Outside of the coffin was a head-rest (base 12.8, top 7.0, 6.5 high) and a calf-leg, on the south. On the west a curved stick 31.8 × 1.3 × .8. The photograph will appear in *Sedment*, pl. xlviii, 5-24.

In the coffin was K 1 body on the top, a young girl, head north, in north-west corner of coffin, 28 ins. from shoulder to knees. North of the head a bowl, 10 F, inverted over a dum nut. Under this was the casket upside down. The strips of ivory veneer were decorated with circles (fig. 6). In it a horn kohl-pot with bone lid (fig. 5). On the neck three strings of beads, (A) 15 silver flies with 2 rows of 3 garnets between each (fig. 8); (B) ostrich-egg discs (fig. 11) with blue glass beads and a green-glazed plaque with cross-pattern and *ankhs*; (C) plain ostrich-egg beads (fig. 9). On level of elbow (girdle 27-30 down), a string of ostrich-egg beads, blue glass, carnelian barrel-beads, and square of Amenhetep I; now rethreaded in original pattern (fig. 12). At the neck a green scarab with 3 *nefers* and *neb* (fig. 17). Near left wrist a green scarab with a god and crocodile (fig. 16). A silver-mounted scarab (fig. 15) was found 2 ins. under R. shoulder, probably from left hand crossed. On each wrist (figs. 19, 20) a string of ostrich-egg beads and black glazed beads. Silver coils by the ears, one on each side (figs. 14, 18).

Body K 2; head south, in south-east corner of coffin, young girl, 46 ins. ankle to vertex.

Body K 3; head south, very fine bones, a young man, 63 ins. ankle to vertex.

Body K 4; head north, an old woman, 62 ins. ankle to vertex. Cartonnage mask broken. Wrapped tightly before drying, in an inch thick of bandages. Muscles all dried, hollow over abdomen. Tied on left wrist a green scarab with curled lines (fig. 22), face inward. Tied on fore finger a green scarab (fig. 21), *hes* between uraei. On another finger plain amethyst scarab. In a pad of cloth between the finger-tips a duck with *ha* on the back, green-glazed (fig. 23). At the left of the ankles an alabaster kohl-pot (fig. 7), XVIIIth dynasty. The lid and 2 kohl-sticks found loose in the filling.

Body K 5; head south. An infant. On the neck a string (fig. 9) of ostrich-egg beads, 1 carnelian and 2 green-glazed beads.

Loose in filling (fig. 24) were 18 amethyst ball-beads and one of carnelian. F. P.]

86. The group of fine pits near Kôm el Iswid were all of the later part of the XVIIIth dynasty. A couple had been dug in modern times; but the others had not been touched for centuries apparently, and their presence could hardly be detected at the surface. The place seemed a promising one, but it turned out to be very disappointing. Our native workman Ali Suefi, who has had some 30 years' experience remarked that he had never seen such fine tombs, untouched by recent diggers, produce such a pitiful collection of scraps. There was no sign of re-use, which is strange: and it is difficult to see who would have plundered them so completely. The shafts were large, with corner foot-holds; the rooms all very badly cut with curved faces, rounded angles, and thin door-jamb. They were filled almost to the roofs with compact water-washed earth and stones. There were no bones, except occasionally high in the shafts: no remains of coffins, except of one of pottery, rectangular with a rounded end: practically no beads at all. There were many scraps of pottery and stone (alabaster, grey crystalline limestone and dark-green mottled steatite or serpentine) and some decorated glass. The pottery was largely of the foreign types: the black jugs, like 91 Q: small flat round double-handled vases: tall red flasks of the 92 class: an occasional false-necked vase, brown with black bands: the handled jar 89 M of fine drab ware: a human head in rough pottery from a vase (pl. lxvii, 57): and a number of examples of the tall jars with thin neck, flat rim, and handle of fine

drab pottery, 90 M. Of the stone vases only two could be drawn; pl. lxvi, 15 of limestone; and pl. lxvi, 13 with its stand 13 A, of the dark grey-green serpentine: there had been a great number of fine alabasters. The glass comprised the usual variegated variety, dark blue with white paste inlay, and blue paste with appliqué cord decoration of the same material.

Can the abundance of foreign (Syrian?) forms of pottery here, and the comparative scarcity of the usual native forms, have anything to do with the name Dameshqin, "the people of Damascus?"

Part of the human head from a pottery canopic vase had the face painted red and the hair black and green. There was also the foot of a large black pottery ushabti. Full details are given in the Register.

87. The XXIIInd dynasty is here used as a general term for XXIIInd–XXIVth dynasties, as most of the objects found belong to the Bubastites. There is little which needs detailed notice in these interments. Very few of the quantities of burials discovered were undisturbed, and almost all occupied the tombs of an earlier date. Only one or two small original graves were found. The coffins, where traces of them remained, were generally anthropoid and plain wood, occasionally inscribed and sometimes painted. There was a striking absence of ushabti figures, so plentiful in the XIXth–XXIst dynasties at Gurob close by, and elsewhere. Not a single one was found. The poverty of the burials can hardly explain their absence. It is, rather, one of the signs pointing to the radical change of burial-customs in the XXIIInd dynasty which was pointed out by Prof. PETRIE (*Illahun*, p. 26). Poor ushabtis were found by Prof. PETRIE with the burial of Amenardus (*Illahun*, p. 27). This would point to their coming again into fashion about the XXVth dynasty.

88. The most important find of this age came from tomb 651, where a scarab of Shashanq I gave us a fixed dating point. This group, comprising scarabs, scaraboids, amulets, small alabasters, pottery and beads is shown on pl. lv. The yellow limestone dish with lugs 24 is a type found in other tombs; and the glazed steatite toilet-dish delicately modelled in the form of a bound ox, is also paralleled elsewhere. (Tomb 607.) The pottery is scanty, but the group contains the two forms 60 and 70 which occur plentifully in other tombs. This dated group, combined with the group from Tomb 9 (*Lahun I*,

pl. xviii) give us examples of all the main and characteristic types. The beads are not very typical, except the form 75 F₂, which is generally found in calcite. The pretty little beads 46 T representing Bast's basket did not occur elsewhere. Fragments of a blue-glaze lotus-cup were undrawable.

89. The principal find of undisturbed burials was made in the north chamber of the "Dome" tomb, and the objects found grouped together on pl. lvA, with the exception of the beads, which practically comprise the XXIIInd dynasty *Corpus* on pl. lxii. The main features of this tomb have been already referred to. In clearing the secondary shaft 17 skulls were found arranged closely together about 1 foot down, with a few other bones. At the bottom were the pots, types 80 P, 80 M, 5 F and 58 D, some sherds, fragments of blue glaze, 22, and a few pieces of alabaster. One vase could be restored and drawn, 23. The skulls must have been placed in position when the south chamber was cleared out for re-burials, and show a certain amount of respect to the previous remains. This would have been done after the partial robbing of the north chamber. The pottery, &c., at the bottom of the shaft came from this. The burials close to the entrance had been disturbed, but the remainder were intact as far as could be seen. A great number of mummies had been placed in the room, almost all, except the youngest children, in anthropoid coffins. One of these, with an unusually well-carved face, was carefully drawn by my wife (pl. lxix, 16). The coffins were stacked three high, and the whole floor, the bench on the west, and three of the loculi were filled with them. Only the upper ones were recognisable as coffins, the under ones having rotted with the damp, and subsided into a compact mass of brown powder. They were all plain and uninscribed, and lay in any direction. Children were in various small rectangular boxes, one shaped somewhat like a modern coffin. The ropes by which the burials had been let down the shaft were sometimes still in position. All the bodies were mummified. One was covered in shawls with fringes, and then bandaged. The outer cross-bands were in two cases striped in colours. Matting was used to wrap some bodies: others were in reeds. Nothing was found outside the coffins, except the two pots 60 M, 60 W beside one, and the large jar 50 M placed against the wall, and containing nothing but dust. The ornaments were few and far between, but of interest.

(A) a child had the figure of the dolphin-headed Hat-mehyt goddess of Mendes 10, of blue glaze finely modelled, suspended from the neck: the silver or electrum aegis, 21, was found under the side of the head.

(B), another child, had round its neck a small figure of Bes, 8 A, and a *menat*, 14, both of blue glaze, a large carnelian barrel-bead, 73 U, and a resin ball-bead 79 F.

(C), also a child, wore wristlets, or possibly a girdle, of 16 cowries strung with tiny beads of red opaque glass 85 K, 92 T₂, 56 Y.

(D) was the only adult man, who was buried with ornaments. He wore on his right hand the scarab, 1, of blue glaze.

Near him was a very small child, (E), with one green-glaze cylinder bead, at neck(?), 73 L₂, and strings of small dark blue ring-beads, 92 T, 68 Y, round the waist.

(F) a young girl(?) wore at the neck a string of white shell ring-beads, 85 F, on which hung at intervals the lyre, 5, vase, 17, and unknown, 18, amulets of green glaze, the pentagonal bead of green glaze, 75 E, carnelian pebble, 46 B₃, three green-glaze cylinder beads, 68 D, 73 M₃, and the blue glass 80 N.

Another young girl (J) had on her right wrist two green-glaze Sekhmet, 13, blue-glaze Nehebka, 7, and blue-glaze *menat*, 12. On her left wrist were the scarab of red paste, 3, and the pebble, 46 C. Small ring beads of green, yellow, blue and red glaze with tiny conical shells probably formed a necklace. 56 G H P X Z, 68 Y, 85 H K L₂ L₃, 92 L R.

A young woman (L) wore a necklace of larger cone-shells with barrel and ring beads of green glaze, 47 S, 68 Z, 73 K M M₂, 85 H₂ L, 92 D L T₂, purple glass 80 V₂, and the multiples 56 F V W. The order observed was quite irregular. Three or four silver ear-rings(?) were also found at the neck.

(M) was another body with 5 penannular ear-rings of silver, 24, together with a Sekhmet, 9, a few pierced pebbles, 46 C C₂, one calcite 75 F₃, one quartz 74 B, one carnelian 80 P, and a few small blue-glaze ring beads, 92 N P. The resin scarab, 2, and the cartouche-plaque of scarlet paste, 4, were probably at the wrist.

(N), another child, had the apple-green figure of Mut, 8 (to judge from the inscription), which had been broken anciently, and a silver aegis, badly crumpled.

(O), an old woman, wore a necklet of blue-glaze ring-beads of two kinds, 85 H₂ K L₃, 92 B H J, a few shells, cylinder-beads 68 K M V, barrel beads 73 M₄, and ball-beads 80 N, with a Sekhmet, 13, cat, 9 A, and vase(?), 19, of blue-green glaze, and the hippopotamus, 15, of light-green paste. Other beads of blue glass were reduced to fine dust; at the wrists were a few small ring beads of blue glaze and decayed glass.

(P), the last body to yield any ornaments, had with it the serpent amulet, 6, and eye, 20, of blue glaze, one silver penannular ring, 25, a calcite hexagonal bead, 75 F₄, and a few small beads of green, red and yellow, 85 H₂, 92 P.

In the extreme north-east corner, lying with bones which had been confused by fallen roof, was the fine Sekhmet, 11.

In the disturbed part of the chamber near the entrance we picked up the blue-glaze hippopotamus, 16, and many varieties of beads: 56 D E G J K L O P Q T U V X, 68 F S W, 73 K T, 80 A G H S, 85 H₄ K, 92 R T₂.

With regard to the glazed figures of goddesses, &c., it should be noticed that they had generally a rough inscription down the pillar at the back, a feature not occurring in other tombs. The inscription gives the name of the goddess, and possibly indicates that these amulets are an early type, the inscription being omitted when the figures were in common use.

90. Another noticeable group of objects from tomb 602 is shown in photograph pl. 1 (top right, bottom left). It comprises examples of most of the characteristic amulets, including the rare lyre with gazelle heads. Three of these were found at Lahun, but are apparently not known elsewhere. Shells were very common in the XXIInd dyn. burials, principally cowries. In this group there were 12 varieties. Two iron lance heads are remarkable, indicating the free use of that metal about 900 B.C.

A similar group from 603 is also shown on pl. 1 (top left, bottom right). The openwork amulet of Sekhmet suckling a king is noteworthy; 14 inscribed scarabs and one plaque are shown on the plate. There were also an uninscribed scarab and scaraboid. The amulets are shown in the plate, all of glaze, except the Taurt(?) of copper, and the dolphin(?) of silver. A great variety of the typical beads were here, including the large crystal spheroid shown in the photograph. Also in the tomb were the 5 sculptor's trial pieces, 3 king's heads, and 2 hawks, photographed on pl. xxxii. Some mud with

the cast of bead-network on it was explained by the presence of many pieces of plaster in tomb 650 with the actual beads in position. These pieces, by their angular forms, showed that a coffin had been filled up with liquid plaster after the mummy with its network covering had been placed in it, no doubt as a means of protection. A piece of white plaster with the impress of network on it was found in 601 (pl. xxxiv, 1). This is not beaded, but it may be an example of the same method of preservation. The XIIth dynasty undertakers acted in the same way, with pitch in 609 and plaster in 107.

91. 609 contained broken pieces of at least 12 alabaster vessels. Although these are doubtless of the XXIInd dynasty in most cases, it must always be considered whether some may not be of the XVIIIth dynasty, belonging to a re-burial of which no other traces remain. Judging from the absence of XIIth dynasty objects, except a few potsherds and a bead or two, the rooms were very thoroughly cleared out in most cases. A scrap of the brown Cypriote ware, with black concentric circles, was found here. (Also in 607, lxvii, 56, and 851, lva, 36.)

92. In 741 on the hill at Bashkatib there was a unique deposit, the date of which is uncertain. In the north-west angle of the chamber, to the right of the entrance, were two make-believe bows of horn, one of an ox, the other of an ibex, strung with rope, and holding a rough stick in the position of an arrow (pl. xlv, 2). These were lying at a height of 20 ins. above the floor of the room. Under them was a flint, some fish-bones, and a pile of long twigs. These rested on sand to a depth of 8 to 10 ins. The tomb had been used for XXIInd dynasty burials, the *débris* of which lay high in the filling. They can hardly be prior to the Bubastite period, and are more likely subsequent, taking into additional consideration their firm condition which does not suggest a great age. Their purpose is quite obscure.

In the clearance of the pyramid, two burials of this time were found in the *débris* at the south-east corner. Photographs of one of these are given in pl. li, 2, 3, 4, showing the three stages of the examination. The coffin was entirely wrapped in a large grass mat, and the mummy itself enclosed in reeds inside the coffin.

Some mummied serpents, with pottery of the XXIInd dynasty, were found laid in a grave 18 ins. deep in the chip platform east of the pyramid.

93. One of the tombs in the Kahun *wady* contained a mass of over 50 burials, heads all piled together, over two coffins. It seemed as if it had been used as a dump for bodies from other tombs. Among the litter were scraps of bronze, fragments of glass, the eye from a cartonnage coffin, one or two odd beads, and a variety of pots of the Ptolemaic age with pottery lamps, shown together as a group on pl. lxi, 1-12. The rough limestone lintels and jamb to the tomb-chamber would be of the same date. The other Ptolemaic pottery found came from tombs in the same vicinity, with a little from the Dyke Ridge.

The Roman burials examined during our work were mostly at the Bashkatib cemetery, and of very little interest. Many had the faces covered with straw pads, and one or two had reeds at the head of the graves running up to the surface. Prof. Petrie suggests that this was intended as an exit and entrance for the soul of the deceased, a survival of the old belief that the *ba* left and re-visited the tomb at will (see *Tarkhan II*, 5), or it may have been the end of a plant stem to mark the graves, like the palm branches placed in Mohammedan graves at the present time. Two groups of Roman pottery, 400 and 622, are given on pl. lxi.

94. An elaborate tomb of early Roman times was cut out of the rock at the south end of West Ridge. A flight of 16 rock-cut steps led to two large chambers with many niches for coffins, and a large coffin-trench at the back. We used this for a time as a dwelling, and it had doubtless often before been thus used. In fact it formed the nucleus for a group of Roman houses, which were planned pl. xxxvii. It is supposed that this was a little military settlement, placed here to guard the desert-road leading to the Fayum. An old quarry excavation up on the hill close by had been used as a stable for the horses or draught-animals, to judge from the manure found in it; and the kiln already mentioned served to supply the inhabitants with pottery. The houses themselves were built on the rock cuttings of one the quarries, so plentiful all round the pyramid. The limestone block, pl. xxiii, which came from here (654 A), is part of an early stele: compare the fragment pl. xxi, 24. The usual potsherds and broken glass littered the rooms. There were many pieces of wine-glasses with feet, of greenish-brown; the kicks of bottles in brown and green glass; and the turned-over edge of a

large flat dish of pale green. Drawings of pots are pl. lxi, 50, 51; glass lxx, 17; the reed lxx, 14; and the wooden hook lxx, 13.

95. A mile or so north of the pyramid in a wide flat part of the desert is a crocodile cemetery, shown as such on the Survey-Maps. These graves were examined and a few notes made. The pits were on an average $3\frac{1}{2}$ ft. deep and varied in size according to the length of the crocodiles. They all lay north and south, with heads to the north. The wrappings consisted of linen bands with red borders, and in one case I found three balls of bandages, 6-8 ins. in diameter, lying underneath a crocodile. Young ones (or lizards?) were laid in the graves as well; one was at the right side of the head; some were underneath, several at a time. They were not wrapped. Perhaps they burrowed in for the eggs. One is shown in the photograph pl. li, 5. In one case a dog was found in the same grave as the crocodile. A quantity of the eggs was a regular feature. These were sometimes laid on the mummy, above and around the head, or placed in amphorae. Over the mummy and eggs were strewn garlands of flowers (pl. li, 5). There was sometimes a stick upright in the north-east and north-west angles of the grave. The amphorae were of black pottery, with peg bottoms, usual in the 2nd century A.D., and occasionally contained dates as well as the eggs. Sherds, both black and red, occurred as well, but no ostraca or papyri. The Director of the Royal Botanic Gardens, Kew, has very kindly had the plants examined, and the following have been identified:—henna (*Lawsonia alba* Lam.) in bud and in flower: marjoram (*Origanum*, probably *O. Marjorana* Linn.): olive (*Olea europaea* Linn.): and *Mimusops Schimperi* Hochst. The henna and marjoram are mostly fastened round bundles of grass leaves, &c., so as to form garlands, in some of which two or three other plants are present, but have not yet been identified.

The skeletons of two very large crocodiles were found buried among the ruins in the pyramid-enclosure on the west side. The heads of these are now at the Natural History Museum, South Kensington.

CHAPTER XIII

KAHUN.

By FLINDERS PETRIE.

96. AT Kahun some few points were worked out which had escaped notice in 1889. The only matter

of interest was a building on the eastern side of the street which runs south from the east of the acropolis (see *Illahun* xiv). The plan of this is on pl. xxxvii, and the views on pl. xlv, 7, 8. In the middle of the south side is a paving of brickwork upon which is a small enclosure of a single line of bricks on edge, 54 ins. $\times$ 31 inside. Projecting from the middle of the front is a kind of brickwork box. This was under a portico, facing north, the roof carried by three columns of which the bases remain in place. On the west of it at a rather lower level (see phot. pl. xlv, 8) was part of a plastered floor with curved edge. Just beyond this was a shallow pit, which had probably been lined with stone as a tank. In front of the middle column stood a small square tank, and a mortar sunk in the floor. The photographs were taken after the floor of this part had been dug away to see if anything were buried. At the middle of the east side was a small underground chamber, 60 $\times$ 40 ins., and lying on the top of this was a stone altar of offering, uninscribed, of a simple type. Along the north part of the court are three granaries, two with an additional enclosure of a curved wall, one of these having eight pits sunk in the floor.

The purpose of this curious arrangement centres on the portico. The rectangle of brickwork seems as if it were a sacred place, with space on the box of brick before it to place an offering. The form suggests the *hetep* table of offerings, and it might be that the brickwork was the support of a great *hetep* slab; but this is very unlikely, as such a slab would be so heavy that the bricks on edge would all have been knocked out of place in the strain of removing it. Their almost perfect order shows that they are just as they were built. If there were any worship here, the mortared floor would be the place of ablutions, and the square pit the place of a water-tank for that purpose. A doorway in that corner—later blocked up—would be the natural access to this.

Up this street, and further toward the centre of the town, a large number of clay sealings were found. Drawings of all of these are given here on pls. lxiv, lxv, see sect. 101.

97. The lower temple of Lahun is on the crest of the low desert immediately above the plain, with an approach leading up from the cultivation. The general position is shown on pl. ii, and the detail on pl. xxxiii, to which this description refers. At the top of the plate are two lines of blocks of

rough stone, which occupy about 85 feet. These are the foundations of the causeway or approach. As these stones are 80 ins. apart at the further end, it is not likely that there was a pavement of single slabs resting across, as that would need stones over nine feet long, and the Egyptian rarely, if ever, used great stones in a pavement. Probably these foundations carried two side-walls, between which was a paving of the usual small slabs.

The causeway led up the hill to a temple about 125 ft. wide, with an annexe of about 17 ft. more on the north. About 157 ft. from the front line is the square pit in the rock with a foundation deposit, described in *Kahun* p. 22, pl. xiv; the objects are now in University College. This pit was about the centre of the whole site, which extended altogether rather over 300 ft. from front to back. The back line is quite undefined, and most of the area is covered with several feet thickness of chips from the destruction of the temple. These chips were mostly turned over in search of sculpture in my work of 1888; but the front part of foundation blocks were covered mainly with sand, and were only uncovered in 1920. The back part had been entirely removed, and there are hardly any blocks outside of those here planned. The black areas are brick pavements or walls. A few pieces of sculpture are given on pl. lxix, 2, 4-10.

98. The north brick wall bounding the temple area has another joining it, at about 20 ft. behind the temple front. These walls are deep, being banked up with marl chips about seven feet, which have thus preserved them. The wall running north is directly in line with the west wall of the town; and though now washed out by a little valley crossing it, was originally the continuation of the town wall. To the west of it are chambers and brick pavements, much denuded. A stone tank probably marks the middle of a courtyard. Four graves of the XVIIIth dynasty have been dug in the pavement, one of which was an important one with five bodies in one coffin dated to Amenhetep I (sect. 85). The continuation of this part northward is cut off at A, and continued as an inset above. The west side of the wall at A has a sloping foot; such is found on the outside of some other walls at Kahun, and it seems as if it were intended to shoot away any rain to a distance from the foundation. The space between this and the thin wall to the south had been used as a stable: beyond the thin wall is a brick pavement.

Turning now to the western region there is a rock scarp parallel to the temple, about three feet high, where the ground had been levelled for the building. Further west is a thin wall, and then a wide brick paving, on which, and west of which, the modern road runs. Further out is another rock-scarp rising about five or six feet to the rise which runs round to the north-west corner of Kahun. The patches of brickwork are much denuded, and the irregular outlines only show where the brick has entirely disappeared, and do not imply an ancient edge at that position. F. P.

99. [In 1914 when turning out the contents of one of the many circular granaries in the eastern portion of the town, we found a number of painted limestone chips, with scraps of what were evidently tomb or temple scenes. The subjects which could be identified were (1) men bearing offerings: one a gazelle, another a bird held by the wings, a third a bunch of lotuses; (2) offering-table with the usual loaves, ducks, flowers, &c.; (3) female figure, in a white garment with shoulder-strap and necklace; (4) hieroglyphs coloured in detail; (5) *Khaker* ornaments of red, blue and green with white lines. All these were on a light *lead-grey* back-ground. There were also pieces of the common chain border-pattern in black and white on a blue ground; a sort of herring-bone border in red and white on a green ground; and fragments of plain black. There is nothing to show whence these had come; the granary was nowhere near the temple.

The question if any distinction can be made between the types of pottery found in tombs and those found in towns has often been raised. A few of the principal XIIth dynasty forms found at Kahun which were drawn are the following: 2 F, 5 Y, 13 P S, 33 L₃, 36 M, 38 A, 55 A, 57 J L N, 67 D₂, S, O₂, 70 U₃, 89 M, 91 H. This is in no way to be taken as a complete or comprehensive list. It merely gives some of the drawable pots picked up among the countless sherds in the town. All these are found in graves, with the exception of 55 A and the tall stand 89 M. The grave types are then, clearly, not specially funerary. On the other hand a few town types are certainly only "household," particularly the dishes incised with patterns (*Kahun XIII*). Though domestic pottery is found in the graves, there was also a large class of rough pottery made for subsequent offerings left on the surface in the Ist dynasty (*Tarkhan II*, 3). One scrap of Kamareware was found in 1914 (phot. pl. xxxii, top middle).

100. Quantities of clay sealings were picked up in the town (lxiv, lxv): also the scarabs lxiii, 6, 7, the cylinder lxiii, 11, and the limestone stamps lxiii, 3, 4. The prehistoric stone vase lxvi, 1 is a good example of the re-use of older objects. Other prehistoric objects were found in the XVIIIth dynasty cemetery at Gurob. A limestone mallet, lxvi, 10, is also unusual. The inscription on a wooden ointment shell, 7.4 ins. long, is shown on pl. lxx, 6; it gives the titles of a high official. Other inscriptions are xlvi, 22, of a certain Khety, the statuette xlvi, 25, of Ay (?), part of a stele of Senusert (xxxv) and another fragment (lxix, 3). Miscellaneous objects figured in the plates are the flint with cord-handle (xxxii) and the trial piece of a man with a fowl (xxxii), a bone bolt (lxx, 11), a wooden peg (lxx, 12), the Roman brooch and rings (lxx, 8, 9, 10) and the jar from a Roman water-wheel (lxi, 53). Some XIIth dynasty pot-marks are given on pl. liii.]

G. B.

101. The sealings pls. lxiv, lxv were nearly all from a house east of the westernmost road in the south half of the great town, apart from the workmen's quarter on the west. This road led up to the acropolis, and would probably be occupied by the staff of the principal house. This suggests there was an office here for the parcels and provisions sent for the governor of the town. As the sealings found at Kahun before (*Illahun IX, X*) go up to no. 193, it seemed best to start the present series from the town at 201; four sealings not from the town are prefixed to these, 197-200. The order of arrangement is kept similar to those published before so that comparisons may be more readily made. By this system it will be sufficient to quote only a number, without reference to plates or volumes.

197 is a fragment of a grand sealing from the offering chamber of the pyramid. 198 is the sealing upon the box containing a baby, buried on the north side of the trench south of the pyramid (sect. 6). The sealing was from an official seal of the "Sealer of the treasury, Mesho," or "Sealer of the army treasury." These large seals with scroll borders may have been on the bases of figures, like a seal on the base of a seated Har-pe-khroti in University College. 199, 200 were on boxes containing food-offerings placed near the strange pit beneath the quarry chips (sect. 22, pls. xiii, xiv). 199 reads "Sealer of the royal... adorer of the offering-place." 200 is of the "Royal... of the

sekhem sanctuary." These were evidently high officials, and their sealings on the boxes of offering show that these were a part of some great ceremony.

We now begin the sealings from the town. 201 is of Amenemhat II, with a blundered inscription, "beloved of Sebek lord of Smennu." 202 to 209 are probably all of Senusert II. 203 and 204 refer again to the house of the adorers of the king. 207 mentions the temple of the pyramid. 209 is a roughly cut limestone stamp. 210 is from a scarab of Senusert III. 211 to 216 are of Amenemhat III. 211 is a wooden stamp, with side-view. 217 to 219 are of *meti-en-sä* priests. 221 seems to have two names, "great name Her-senbtef; good name User-tesen," the group *ren* serving for both forms of name. 224 is of the "Great seer (high priest) of Heliopolis, royal scribe of the companions, Iu-senb-ef." 225 is of a lady Ata. 226 "the citizen Sebek-user..." 227 "...in the sed feast." 228 "...nefer, justified." 229 "Inspector of the prince's geese..." 232 is an official seal from the temple, "House of offerings of the king." 234 probably of Beba. 237 "keeper of the office of agriculture Iyab." It is uncertain whether the Ra-nefer scarabs, 242 to 249 have a king's name, or an adoration of Ra: the cartouches 244, 246 point to this being a name. The figure 252 is delicately cut, but the subject is unknown. 253 is most like a button-seal, in the style and circular form. 254 is a beautiful design, apparently under Cretan influence. The pairs of vultures or falcons, 262 to 266, are apparently the continuance of the Syrian symmetric style of button-badges. 266 is a seal of black steatite. 272 is a seal cut in wood. 306 has a remarkable object below, like a Celtic armlet with trumpet-ends; it might possibly be derived from a loop like 307. The two *neb* signs 309 to 315 start in the IXth dynasty, but continue beyond the XIIth dynasty. 320 is a rudely cut seal of limestone. The portion of a very fine sealing, 342, of the "great sealer" was in the S.W. deposit of the Sed chapel, having been used to seal an offering. This indicates that the building was a royal structure; the ending of the spirals in uraei is very seldom seen. 379 looks much like the style of an amethyst scarab in the form of the scrolls and absence of a border line. The elaborate cross-pattern, 397, is scarcely Egyptian in style. 409 is a very strange mixture of large scroll-lines and cord-pattern. 426 is very obscure and uncertain in date, it comes from tomb 745. F. P.

CHAPTER XIV

THE INSCRIPTIONS.

By M. A. MURRAY.

102. xxvi. ALABASTER magic jar. "(1) The king's daughter Sat-Hather-ant. May be given to thee these cool waters (2) which are in the earth, begetting all things living, (3) everything which this earth gives, Behold, This is the begetter of all things (4) living, and comes forth everything from it on which thou livest. (5) Thou art presented with them. Thou livest [on], thou art presented (6) with this air which is in it. It begets thee (7) Thou comest forth, thou livest on all things that thou desirest, that are good, of that which is therein."

xxix. These fragments are chiefly from the list of offerings, each item being individually dedicated "to Anpy." No. 36 begins the usual prayer "O, ye who live upon earth," the vertical lines give the titles of the deceased, (1) "The hereditary prince, the chief, the seal-bearer of the king of Lower Egypt, (2) the oracular priest of the plover, ??, the prophet of Maât, (3) the overseer of all the works of the king in the whole land, (4) the overseer of the palace, Anpy, lord of devotion." For the translation of *mdw rhî-t* as "Oracular priest of the plover" see *Ancient Egypt*, 1917, part ii; p. 64. The title which follows reads *sdm-t dšr-t in*; literally translated it is "Red ear of the pillar." The actual meaning of the title is unknown; it may be a variant of the Old Kingdom title



which usually occurs in close connection with the *mdw rhî-t* title, but which is also not explained as yet.

xxxix, 74. (1) May the king give an offering, a thousand bread and beer, oxen and birds, linen, incense and perfume, (2) and all things good and pure on which God lives, for the *ka* of the worthy before (3) the king of Upper and Lower Egypt, Snefru, seal-bearer of the king of Lower Egypt, overseer of the palace, Anpy, lord of devotion.

83. (1) ... a good burial..., (2) in the western desert..., (3) for the hereditary prince, the overseer of works..., overseer of the palace, Anpy...

103. xxxiv. The inscriptions on this plate are too fragmentary for consecutive reading. Several fragments are from a list of offerings, notably no. 28 which gives the names of two wines. No. 18 mentions the rather rare priestly title, the

udeb of Horus and Min. No. 26 gives the title "Scribe of the book of the God."

xxxv, 1. (1) May the king grant an offering and Anubis, leader of the divine shrine, (2) chief of the snake-mountain, he who is in Ut, (3) lord of the sacred land, for the *ka* of the worthy one, (4) Senusert. May ye place(??)...

2. Coffin inscriptions unintelligible.

xxxvi, 1. *Altar. Right to left.* May the king grant an offering and Geb, the great ennead of gods, and the southern shrine. May he give funeral offerings, bread and beer, oxen and birds, linen and perfume, on the festival of the month and the half-month, on the Uag-festival and the festival of Thoth and of every day, for the *ka* of Khnems-khered, born of the lady of the house Nefert, deceased.

Left to right. May the king grant an offering and Osiris, the little ennead of the gods and the northern shrine. May he give funeral offerings of bread and beer, oxen and birds, linen and perfume, and all good things on which God lives on the festival of every going forth of Min and of Sothis, for the *ka* of Khnems-khered, born of the lady of the house, Yb, deceased.

There are a few points about this inscription which deserve notice. The name Geb is written with a sign which looks like a lotus-leaf, but is probably the bag 𓆎 . This sign, never very common, occasionally has the phonetic value *gb*.

The translation "Geb and the great ennead and the southern shrine" can hardly be accurate as the inscription should then continue *dî-sn* instead of *dî-f*; I therefore suggest that the translation should run "Geb of the great divine ennead of the southern shrine." In that case the parallel prayer would read "Osiris of the little divine ennead of the northern shrine."

The filiation gives two names to the mother: Nefert on the left, and Yb with the determinative of the kid, on the right.

5. Gives only the name Senusert. The other pieces are too fragmentary to give any consecutive reading.

xlvi, 19. (1) ...funerary offerings for the one worthy before (2) Ptah-Seker, (3) Ity, born of Senz.

22. May the king grant an offering of a thousand of bread and beer for the *ka* of the attendant Khety, born of...

25. May the king grant an offering for the *ka* of the... Yay, lord of devotion.

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Tall lamp	do.
Small lamp	Brussels
Cap-stone frags.	Univ. Coll.
Casing-stone	Brussels

KING'S TEMPLE

3 fragments	Aberdeen
1 do.	Brussels
11 do.	Sunderland
2 do.	Cambridge
1 do.	Brooklyn
25 do.	Chicago
6 do.	Nottingham
1 do.	Brit. Mus.
1 do.	Rochdale

QUEEN'S TEMPLE

33 fragments	Cambridge
Foundation dep.	Bristol

PYRAMID DÉBRIS

Rough stone bowls	{Brussels, Reading, Brit. Mus., Rochdale, Cambridge Ethnol.
Roman key	Cambridge Ethnol.
Alab. weight (?)	Univ. Coll.
Stone ostraca	Oxford Univ. Coll.,
Mallets	{Brussels, Cambridge, Brook- lyn, Univ. Coll. (2), Reading, Bristol, Rochdale, Manchester
Rollers	{Cambridge, Brooklyn, Read- ing, Univ. Coll., Manchester, Bristol, Rochdale
Cramp	Bristol
Wedge	Cambridge Ethnol.
Baskets	Cambridge Ethnol.
Hoe	Horniman
Arabic pots	Univ. Coll.

PYRAMID QUARRY

Oar	Bristol
Offering-boxes	{Brussels, Manchester, Bristol, Rochdale, Brit. Mus.
Timbers	{Glasgow, Sunderland, Univ. Coll.

SED-HEB CHAPEL

Foundation dep.	Univ. Coll.
Bull's head	{Natural History Museum, S. Kens.

Kiln Tomb	Sydney
Dome Tomb	Cairo, Reading
Tomb 1	Sherborne
2	Edinburgh
7 beads	Univ. Coll.
box	New York
8	New York
9 beads	Rochdale
52	Edinburgh
57	Edinburgh
101	Rochdale
102	Rochdale
103	Rochdale
119	Ipswich, Rochdale
128	Rochdale
141	Rochdale
601	Manchester
602	Oxford
603	Glasgow
604	Dundee
near 604	Rochdale
608 scarab	Philadelphia
kohlpot	Sydney
papyrus	Cairo
mallet	Cambridge Ethnol.
rope	Cambridge Ethnol.
cramp	Copenhagen
609	Brooklyn
610	Rochdale

Tomb 616	Rochdale
617	Oxford
618	Rochdale
619	Dundee
620	Chicago
621	Chicago
623	Rochdale
626	Edinburgh
650	Sydney
651	Cairo, Univ. Coll.
653	Manchester
654	Hague
701	Reading
705	Sydney, Melbourne, Michigan
706	Melbourne
708	Copenhagen
709	Univ. Coll., Rochdale
710	Melbourne
712	Copenhagen
714	Charleston
717	Univ. Coll.
722	Michigan
734	Sydney
743	Oxford
747	Univ. Coll., Cambridge Ethnol.
748	Michigan
749	Brighton
751	Michigan
754A	Manchester
757	Brussels, Oxford, Univ. Coll.
758	Charleston
759	Manchester
760	Manchester
762	Manchester
767	Reading
770	Brussels
771	Univ. Coll.
774	Oxford
776	Michigan
781	Melbourne
785	{Copenhagen, Edinburgh, Brighton, Brussels, Univ. Coll.

Tomb 792	Manchester
793	Michigan
796	Michigan
802	Sydney
814	Sydney
903	Cairo
905	Edinburgh
906	Philadelphia
913	Manchester
N. 2	Chicago
N. 9	Bexhill
N. 11	Edinburgh
N. 12	Chicago, Rochdale
N. 14	Rochdale
N. 15	Bexhill
K. 1—5	Univ. Coll.
KI. 7	Oxford

KAHUN

Limestone seals	{Cambridge, Univ. Coll., Manchester
Scarabs	{Cambridge, Univ. Coll., Glasgow
Nail	Univ. Coll.
Flint knife	Reading
Peg-top	Reading
Needles and thread	Glasgow Art.
Needles, tweezers	Chicago
Thread	Nottingham
Fishing-net	Rochdale
Thread on winder	Rochdale
Needles	Rochdale
Wood relief figure	Manchester
Black granite head	Rochdale
Sealings	Oxford, Univ. Coll.
Prehistoric vase	Oxford
Toys, tip-cat	Sherborne
Scarabs (2)	Sunderland
XVIIIth dyn. burial	Univ. Coll.
Roman brooch	Manchester
4 mummied crocodiles	Brooklyn
2 crocodile heads	South Kensington

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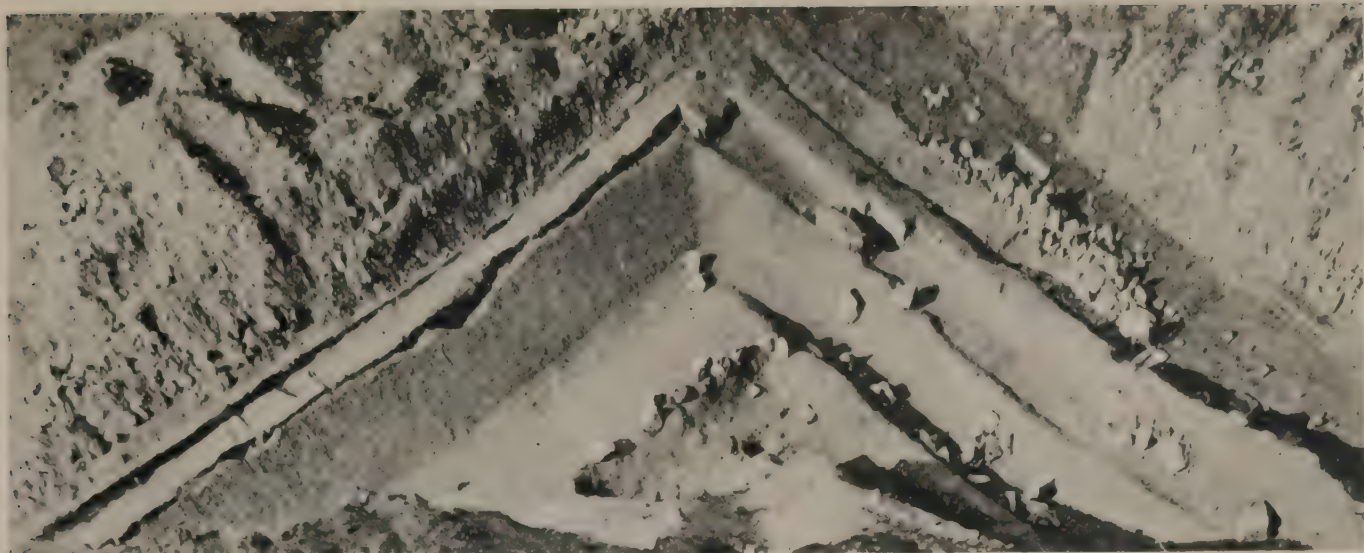
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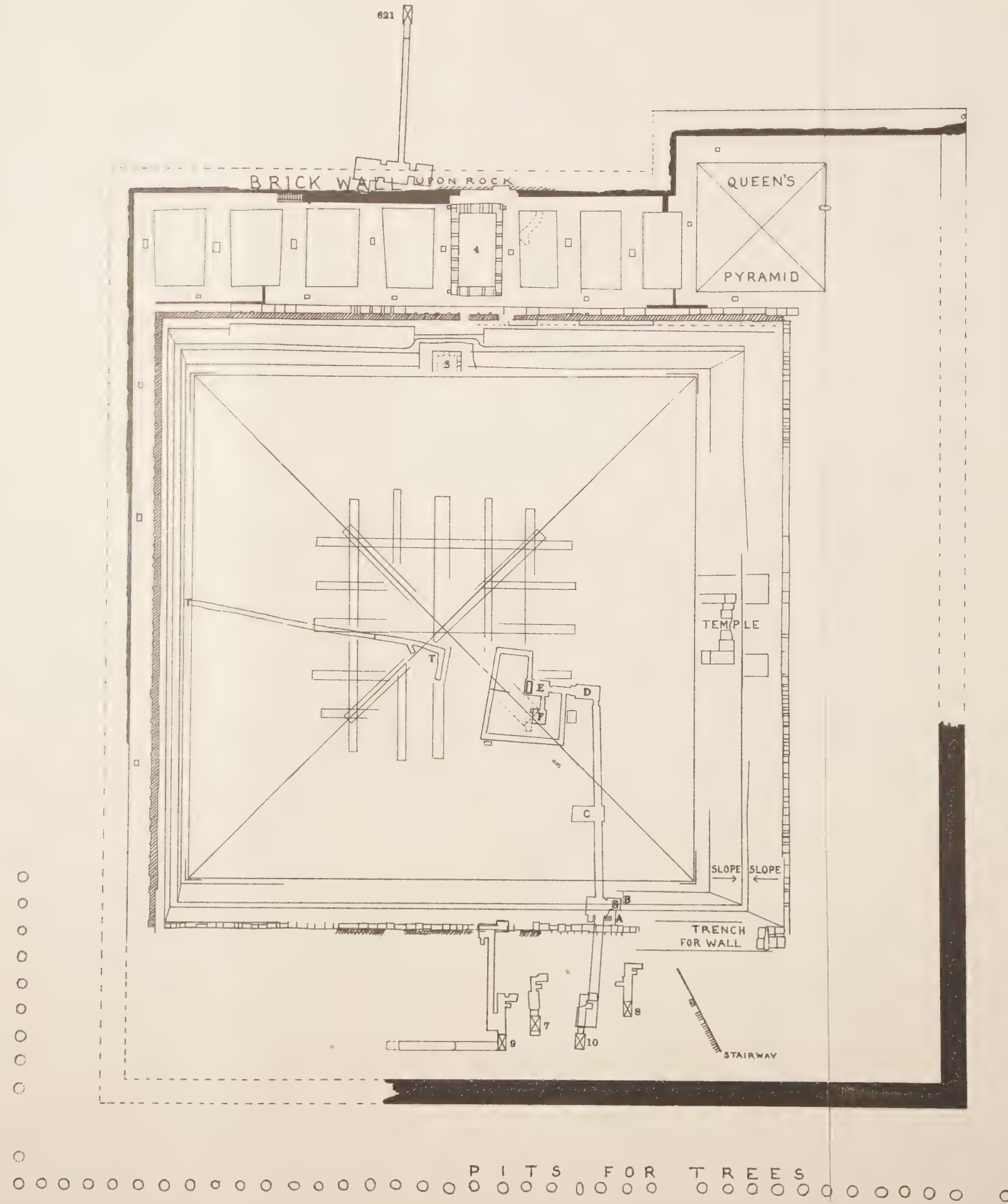








ENCLOSED PIT



OFFERING PLACE

LAHUN. PYRAMID VARIATION FROM TRUE SQUARE.
1:60. DIVERGENCE OF ROCK CUTTING x 10

EDGE OF ROCK SOCKET FOR CASING

CASINO

PROBABLE SIDE OF PYRAMID

TRUE SQUARE 107 METRES

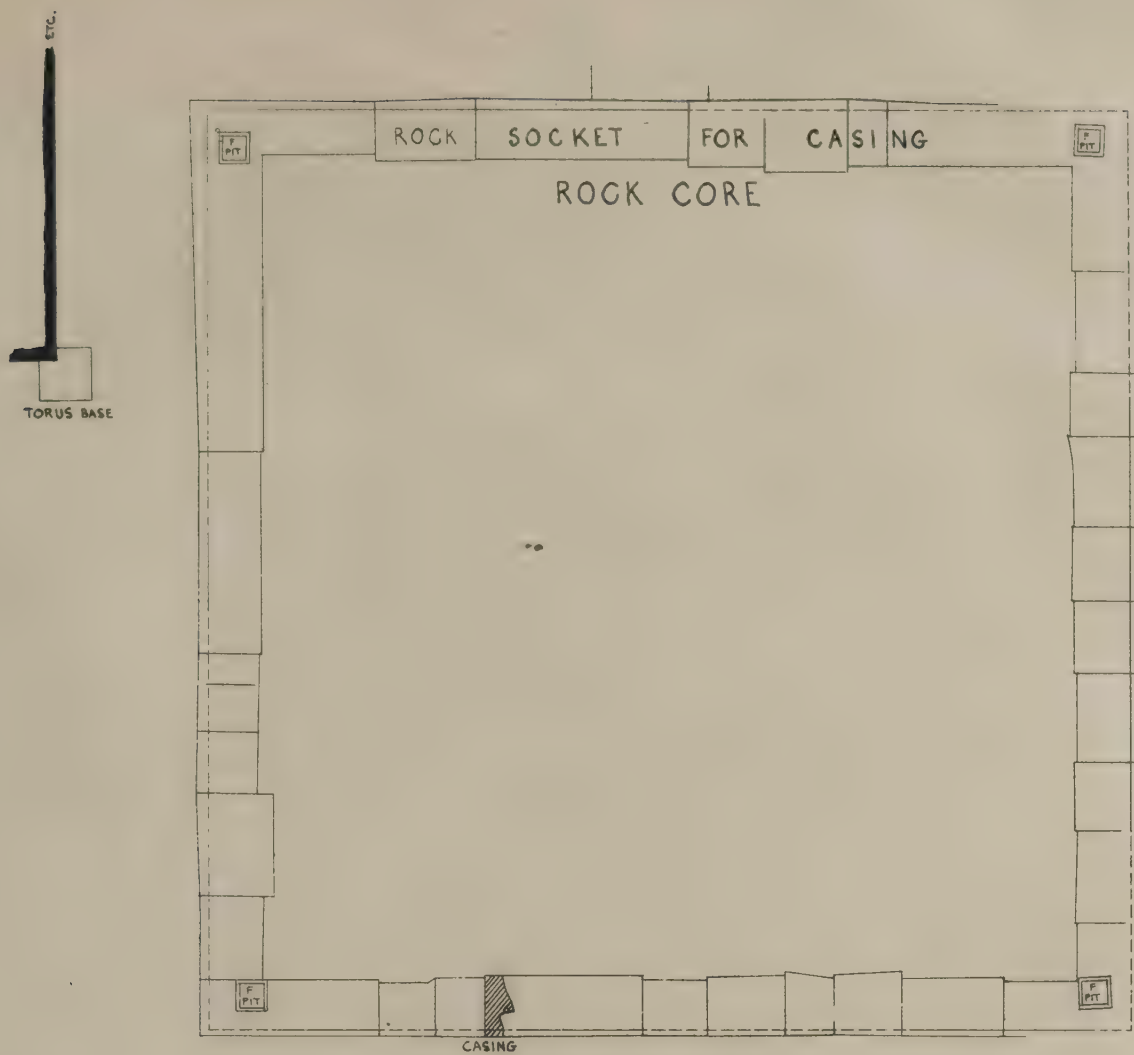
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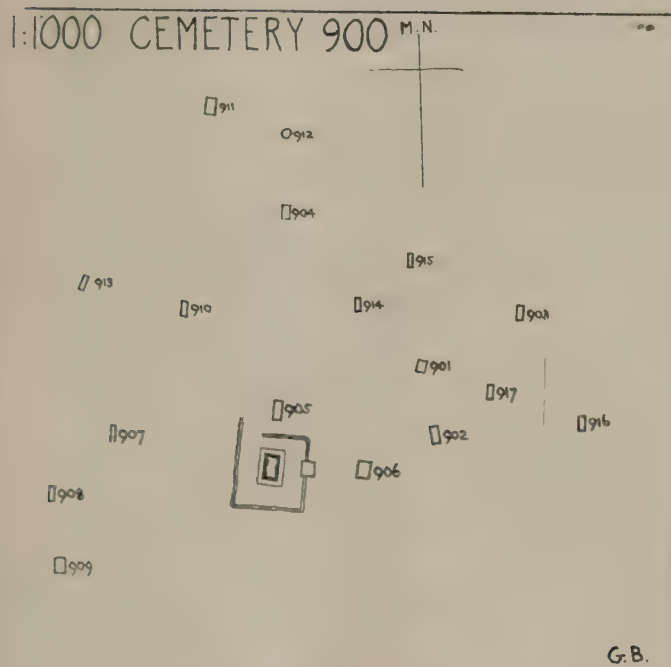
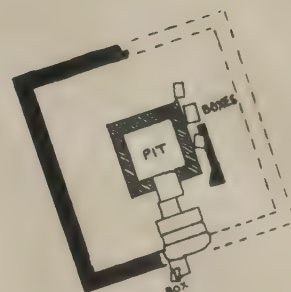
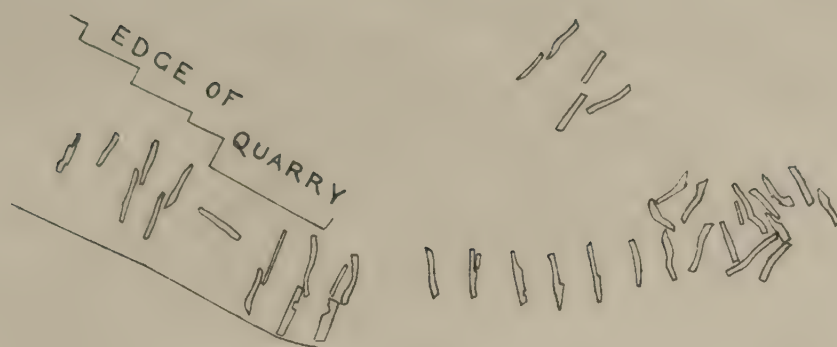
F. P.





1:2000 TOMB GROUP EAST OF PYRAMID





G.B.

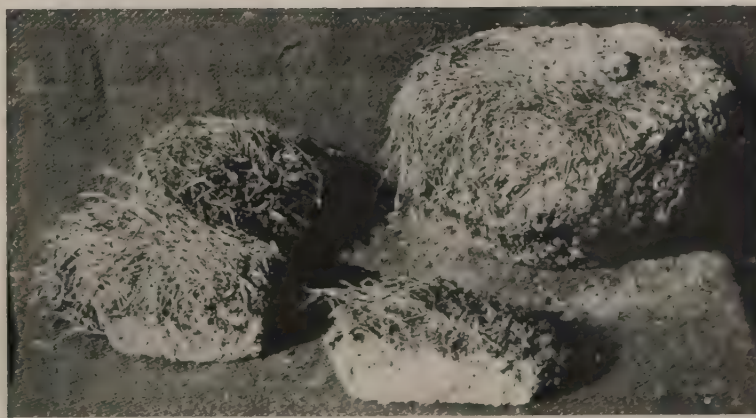
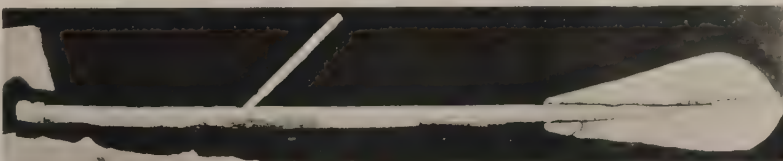
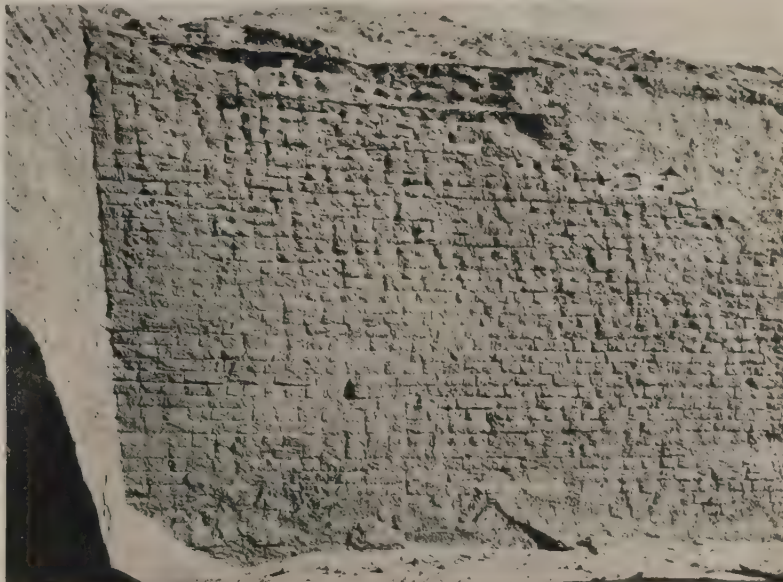
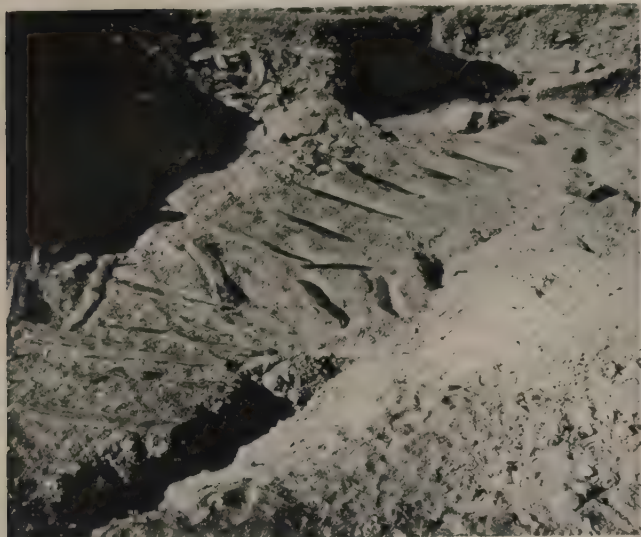
F.P.

1:800 WEST HILL.

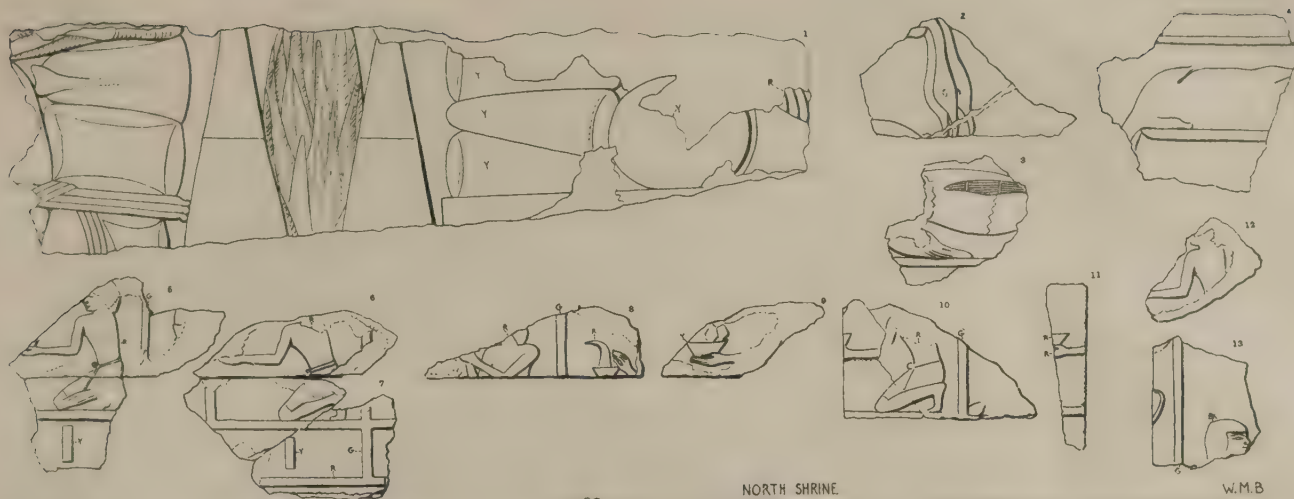


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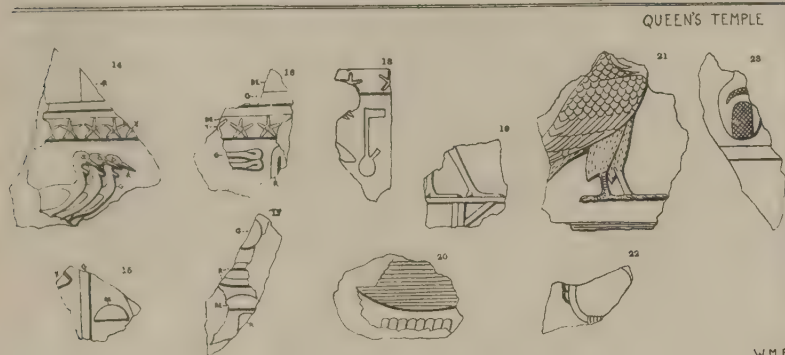






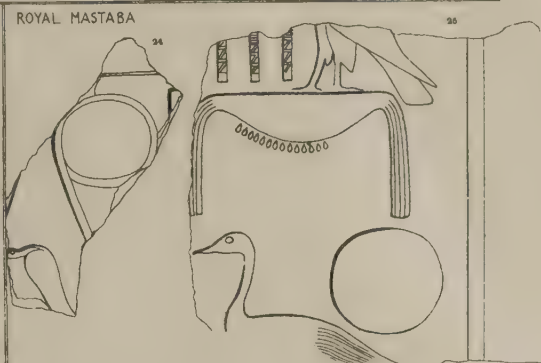
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W.M.B.



QUEEN'S TEMPLE

W.M.B.



ROYAL MASTABA

W.M.B.



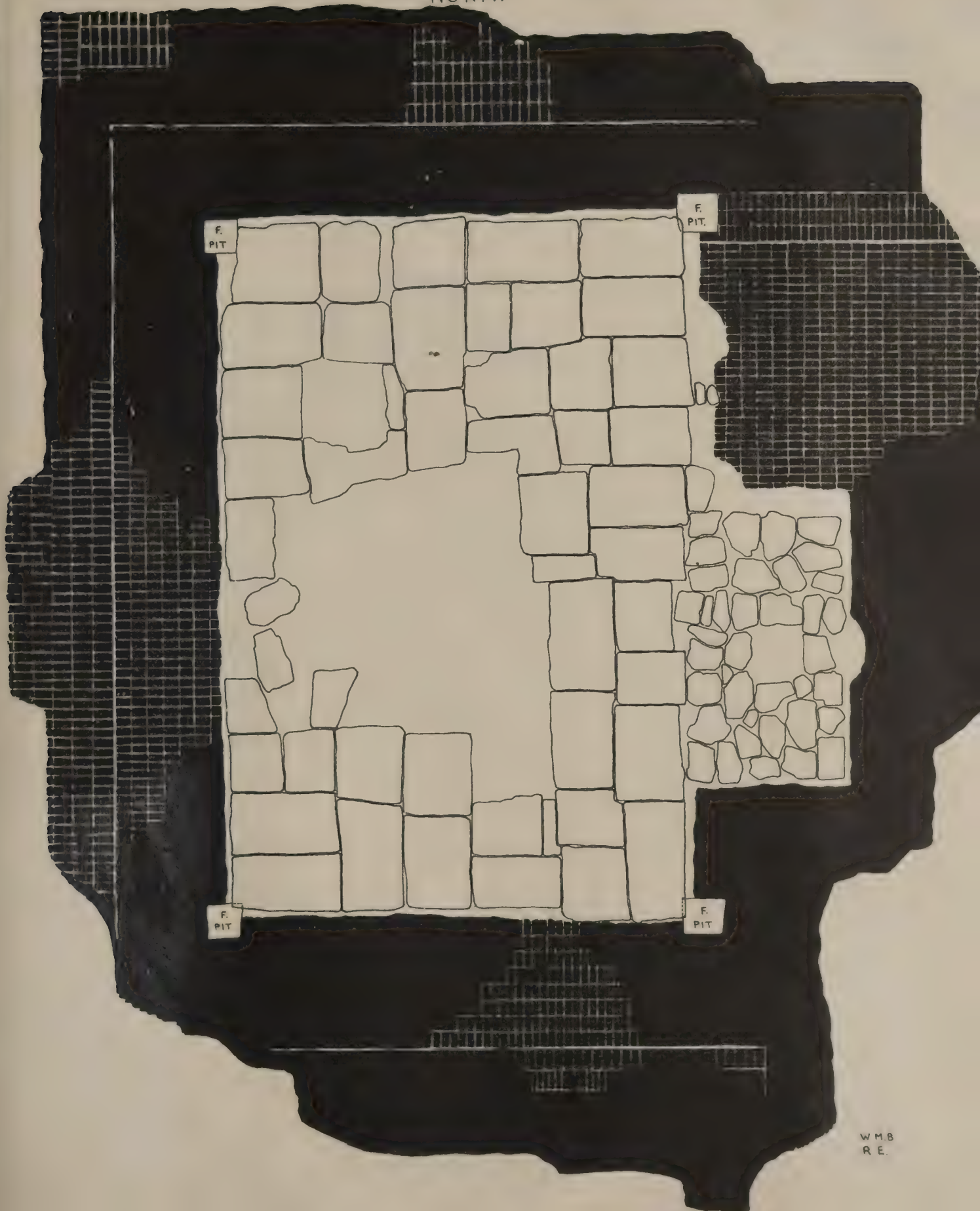
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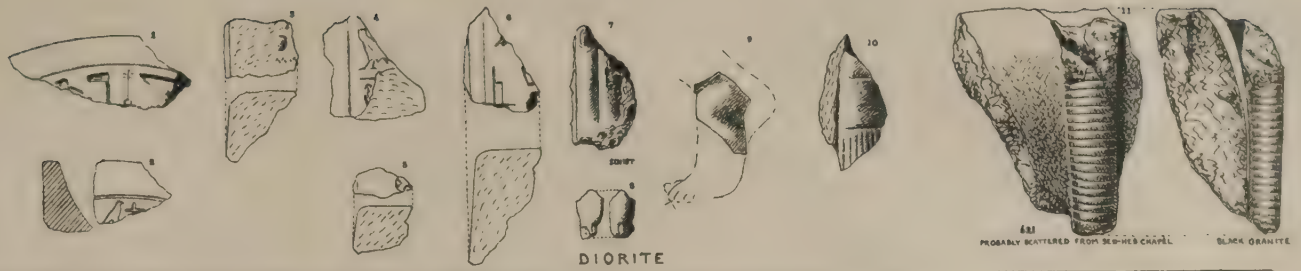
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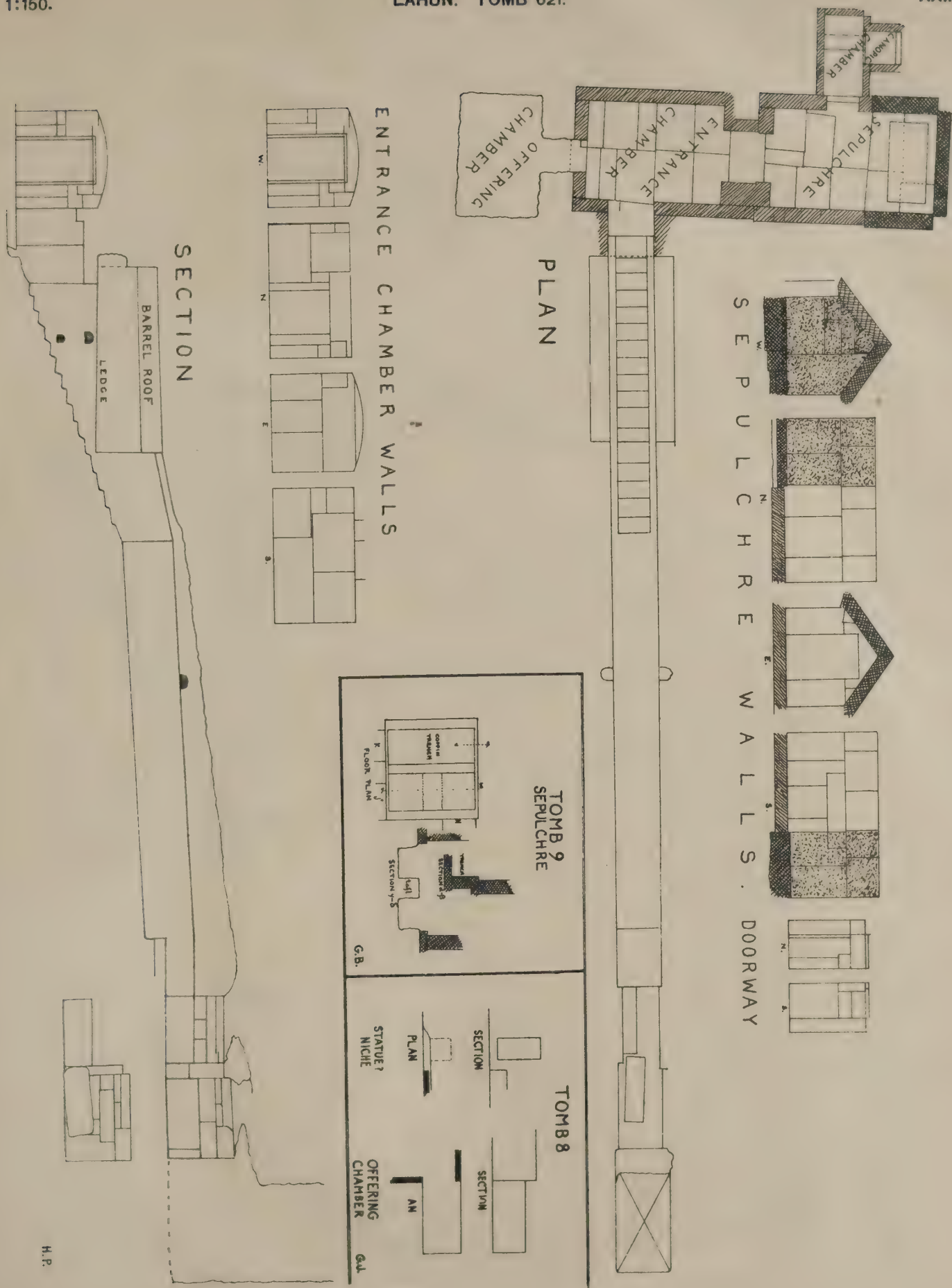


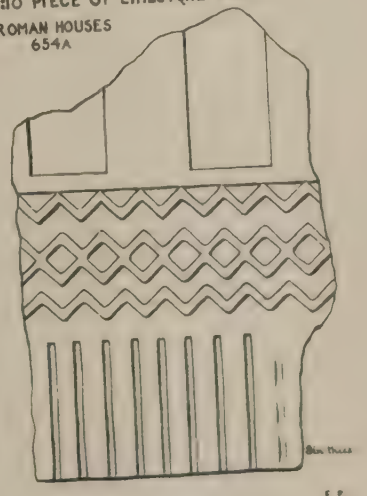
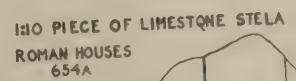
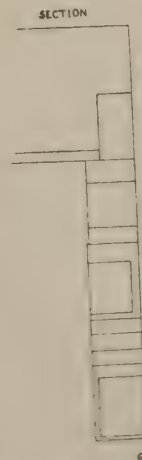
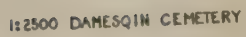
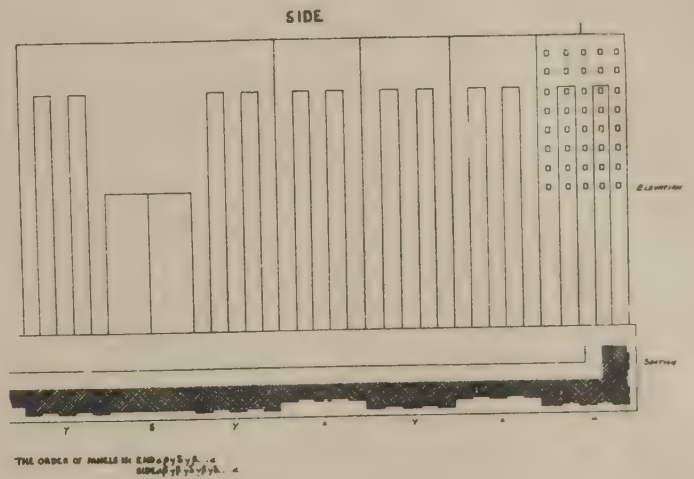
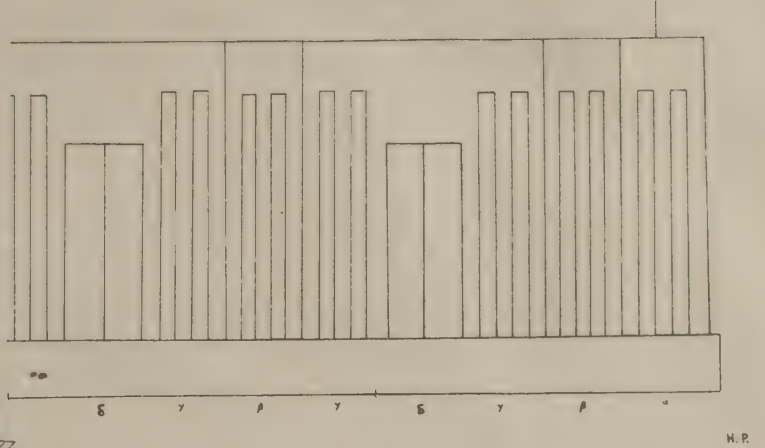
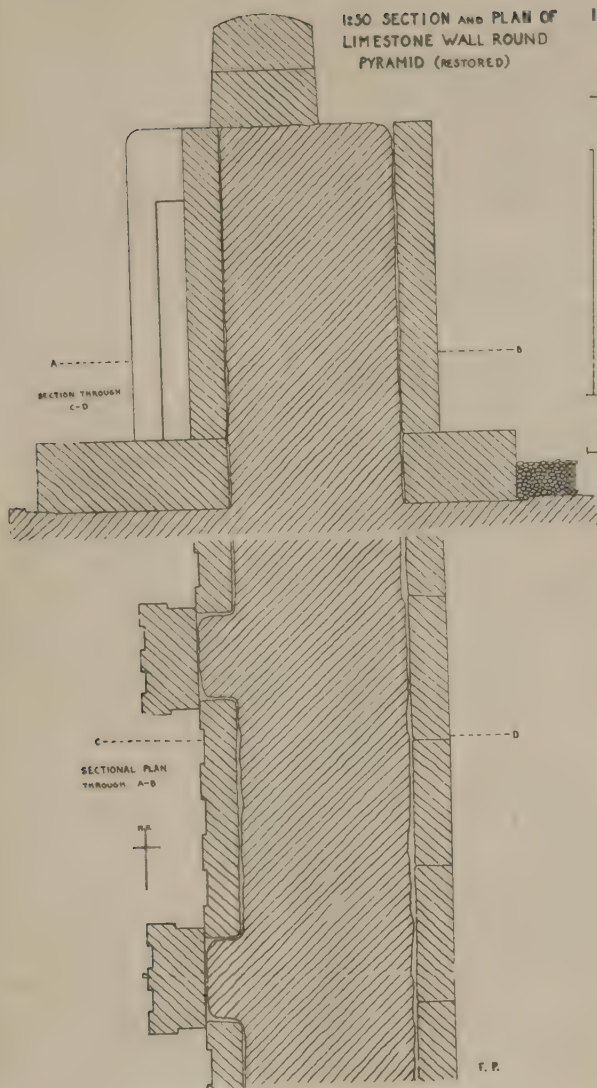


NORTH







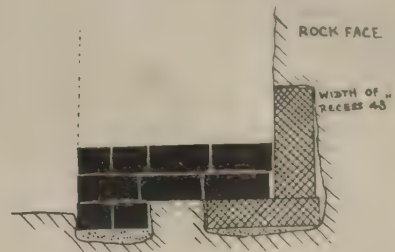


1:200 BRICK STEPS S.E. OF PYRAMID



F.P.

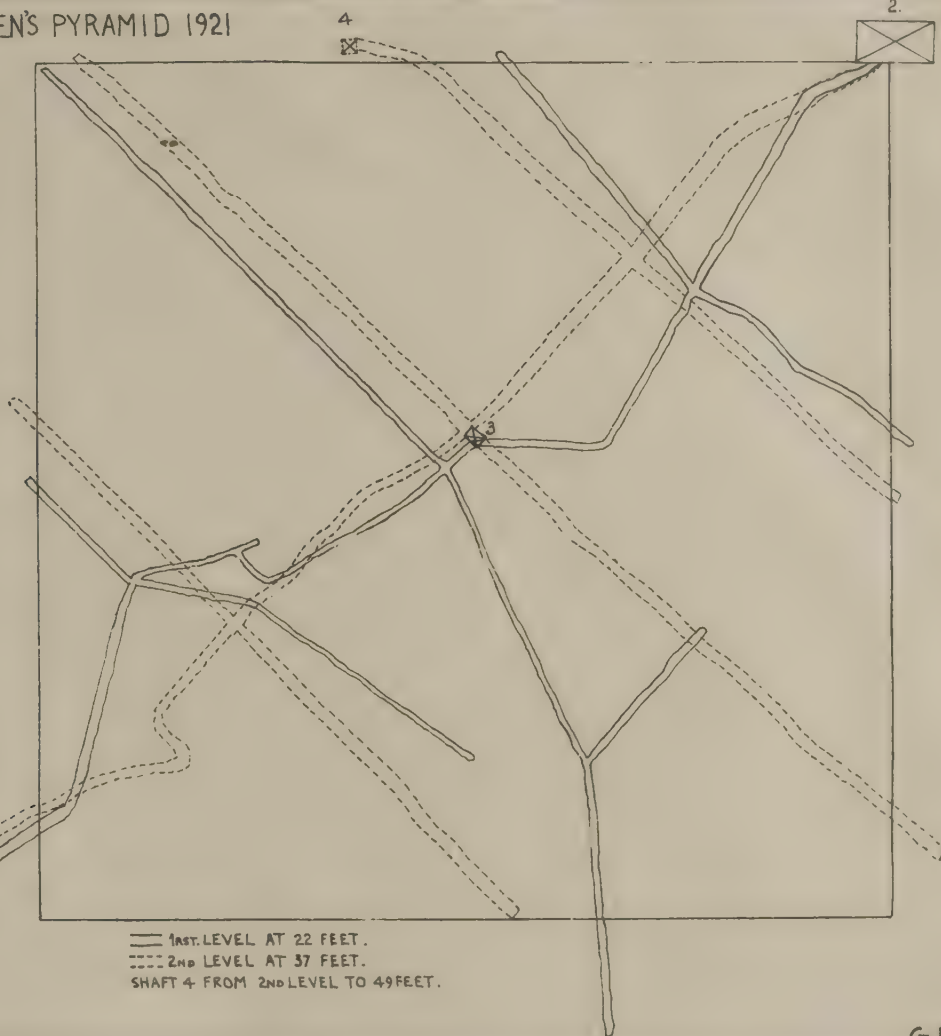
1:50 SECTION OF N. BRICK WALL WITH SLABS



G. B.

1:192 TUNNELS UNDER QUEEN'S PYRAMID 1921

M. N.



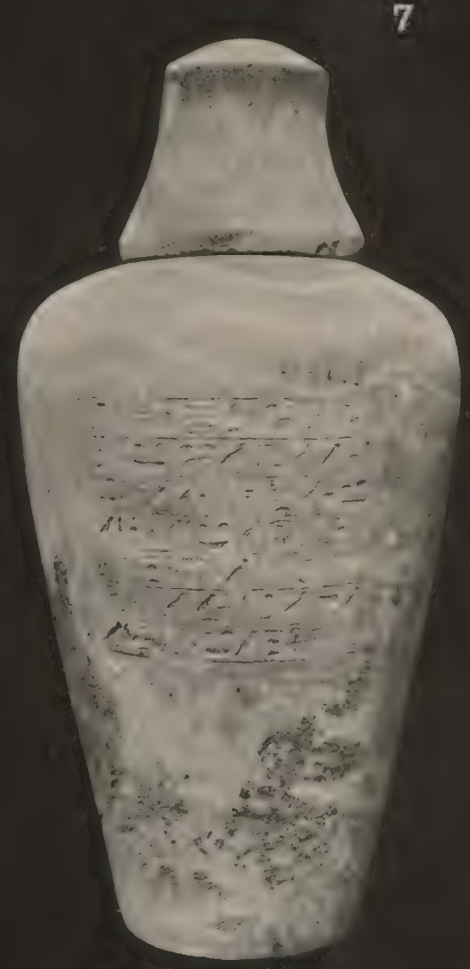
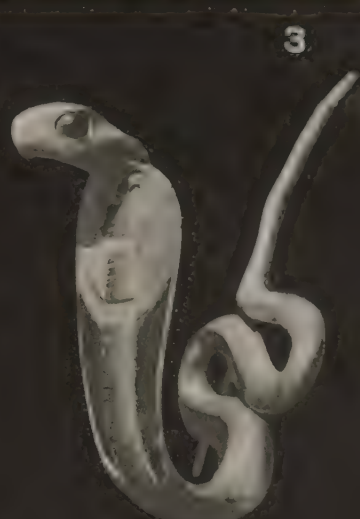
— 1ST. LEVEL AT 22 FEET.
 --- 2ND LEVEL AT 37 FEET.
 SHAFT 4 FROM 2ND LEVEL TO 49 FEET.

G. B.

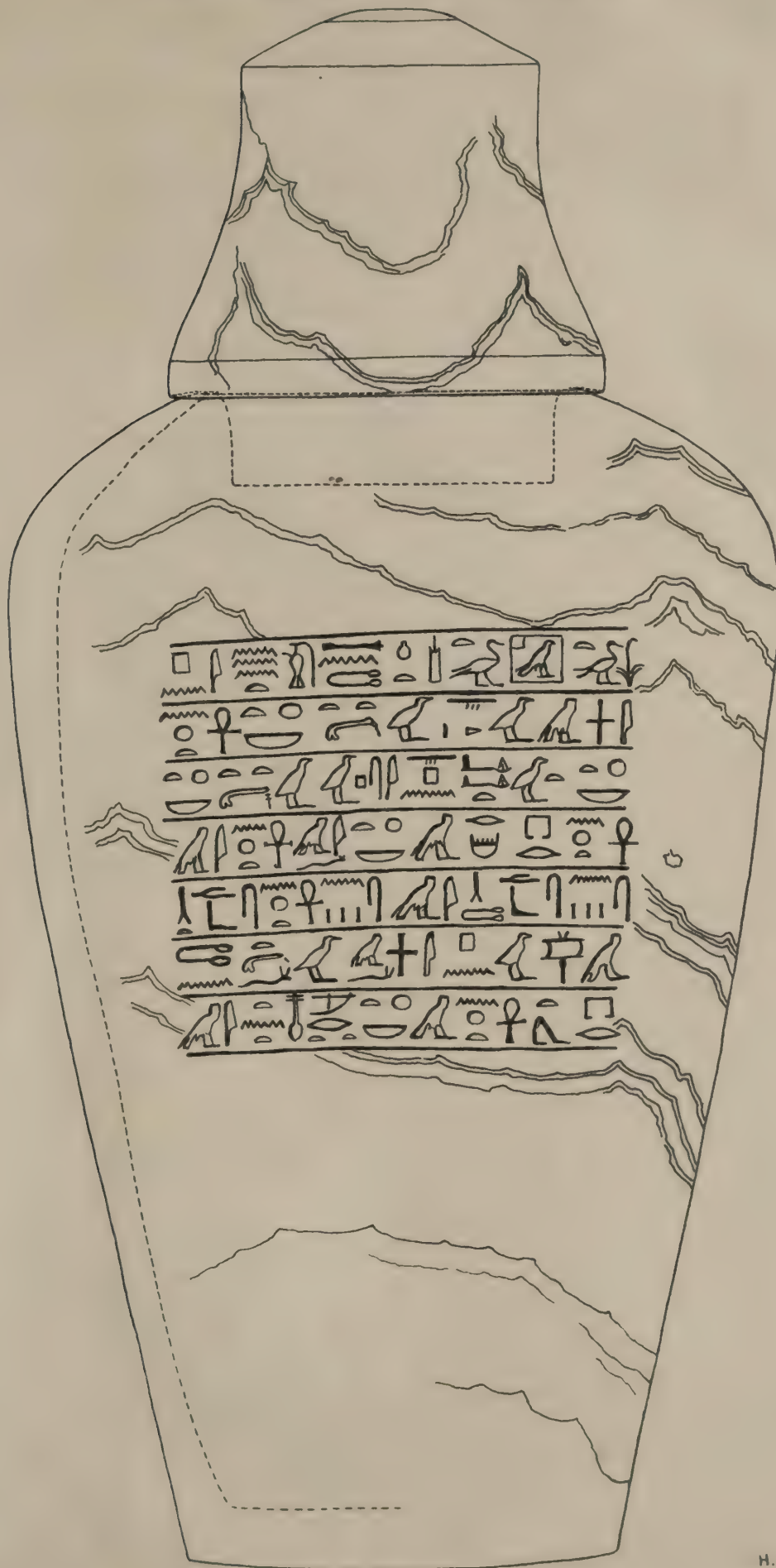
1:2 BLACK GRANITE PYRAMIDION

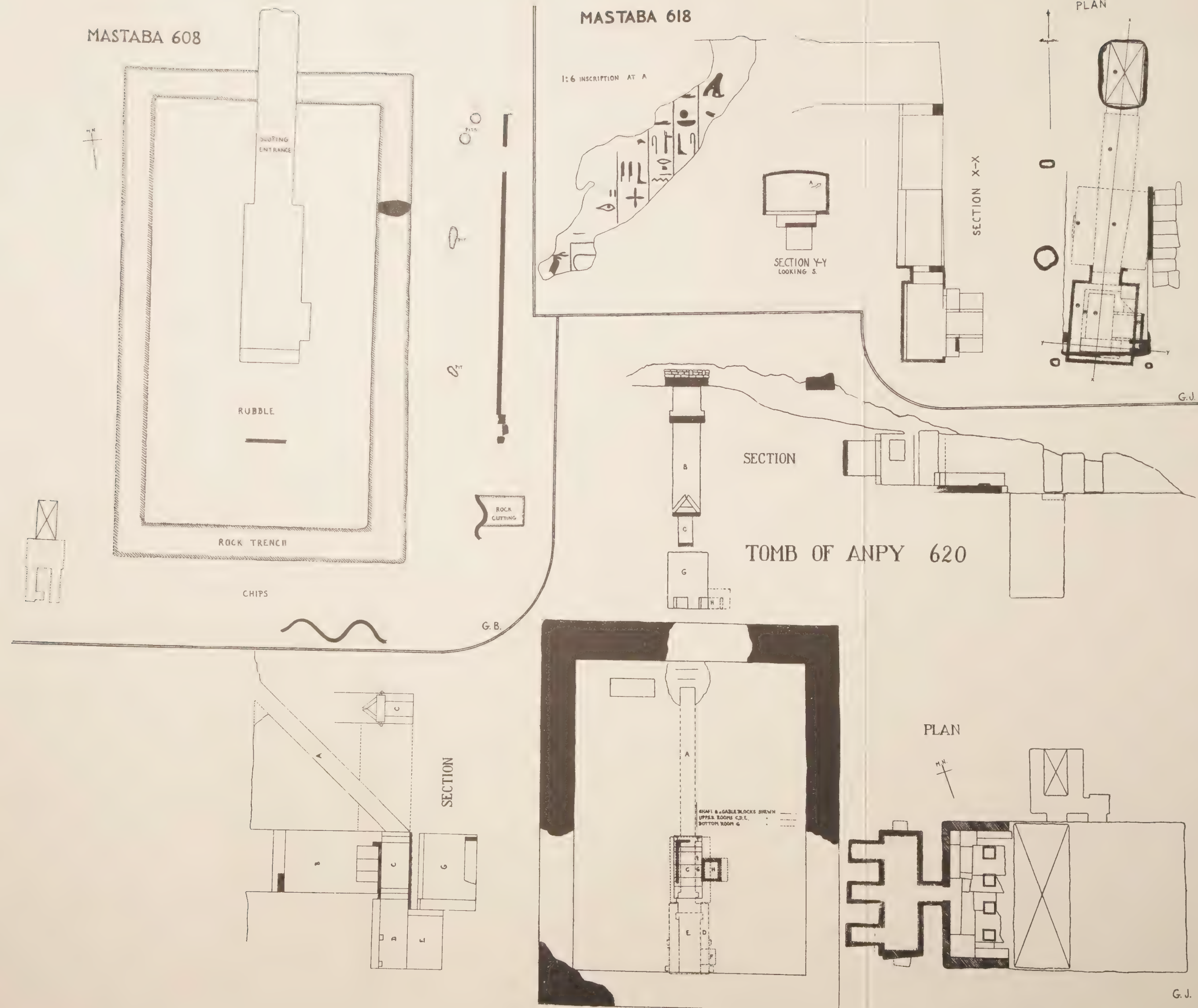


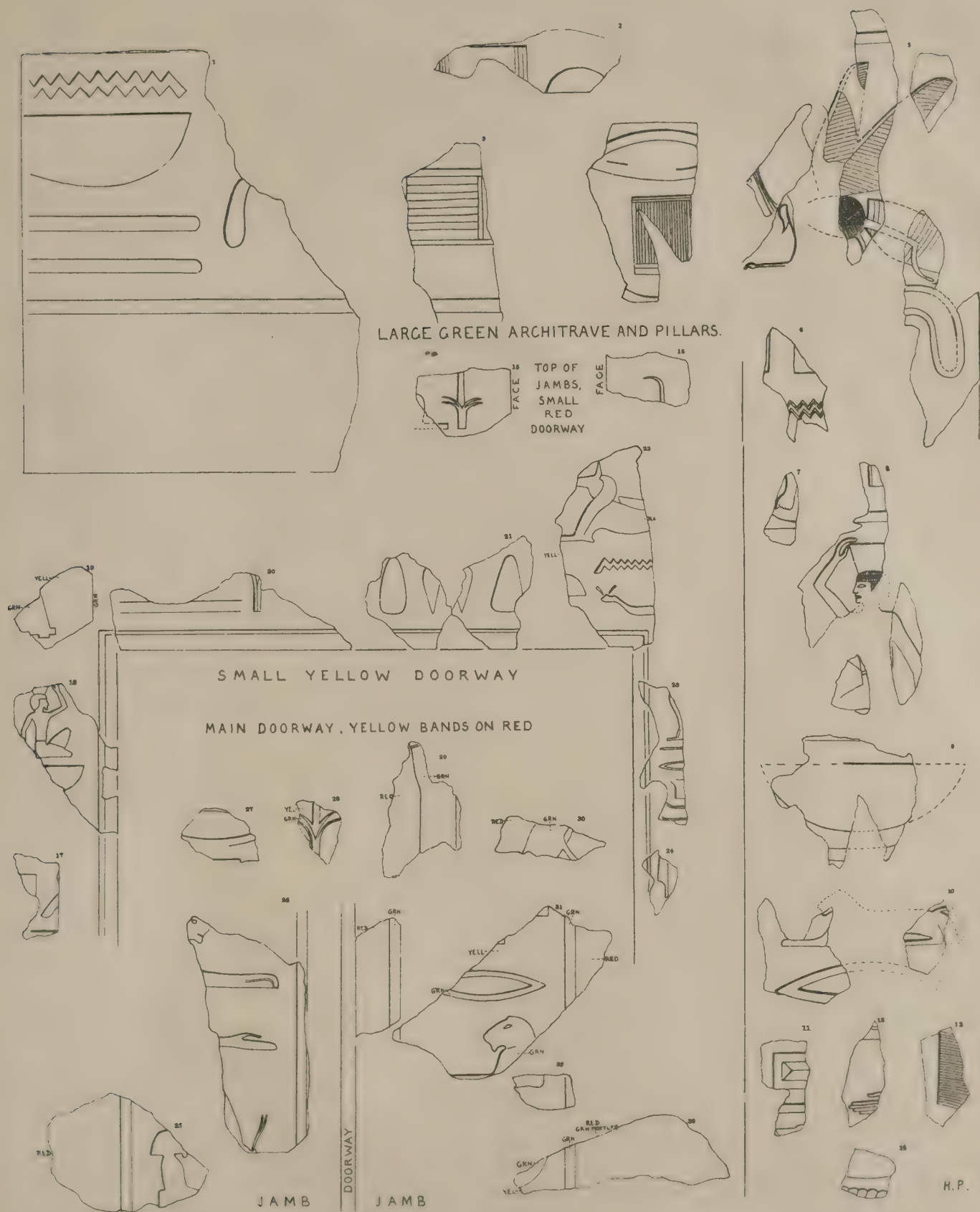
W. M. B.

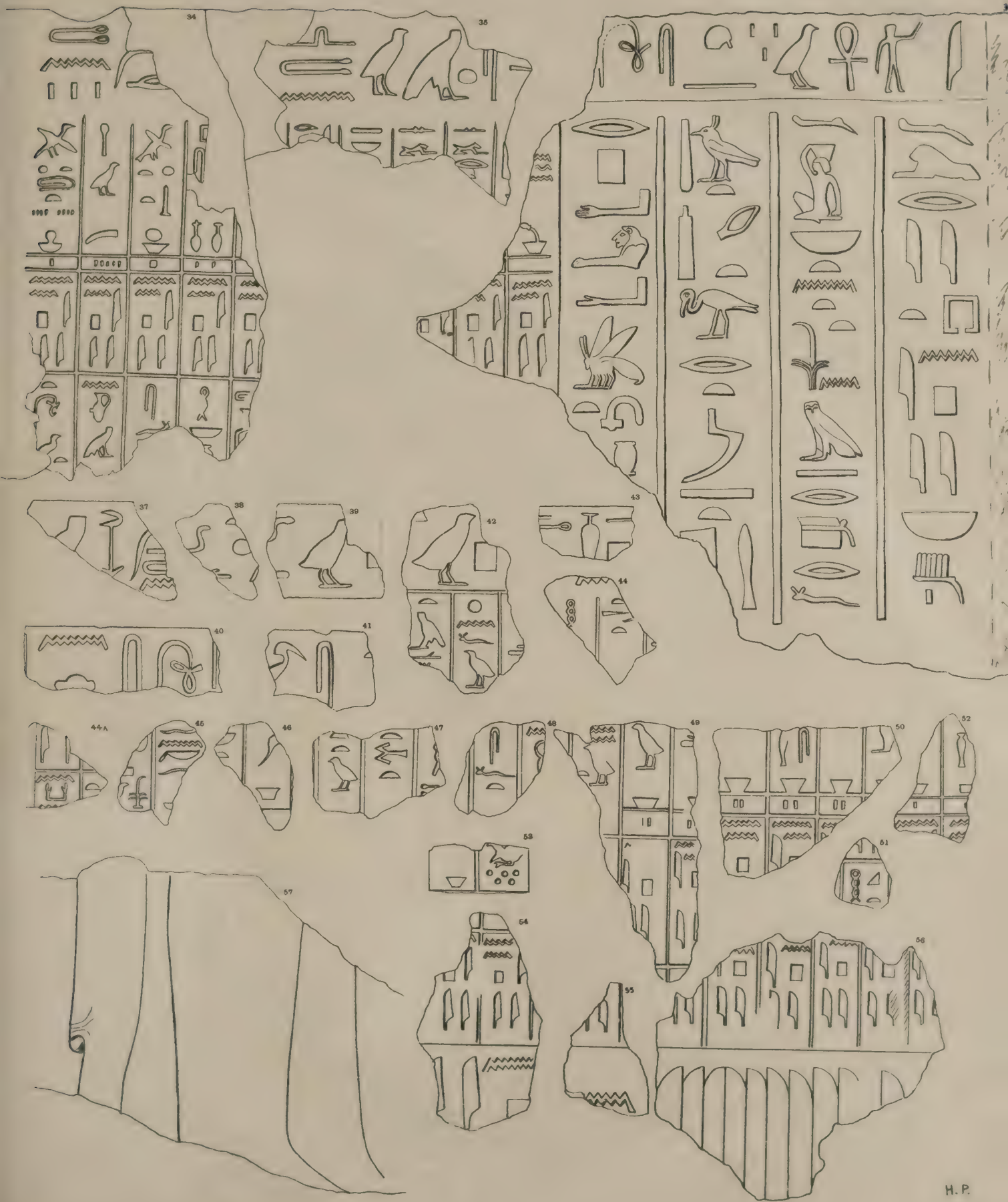


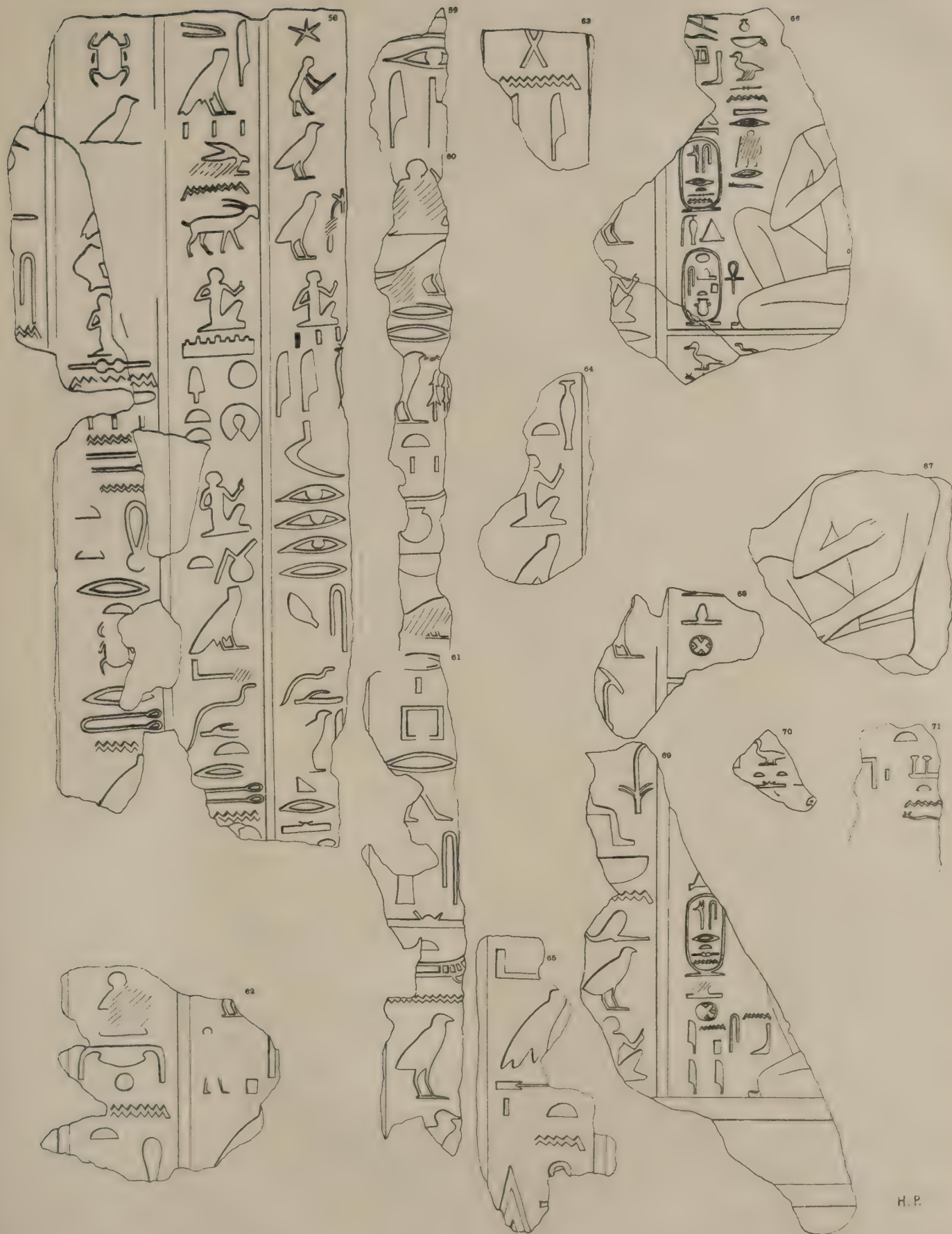


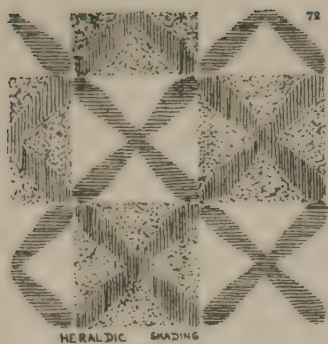








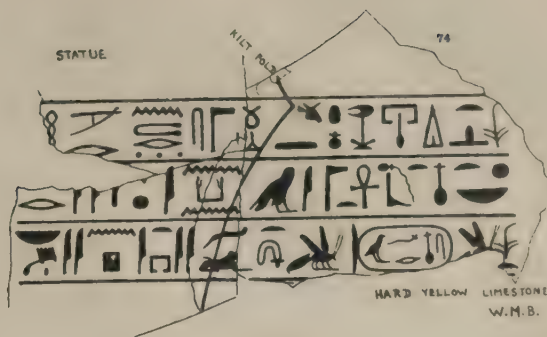




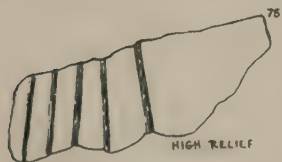
HERALDIC SHADING



RELIEF



HARD YELLOW LIMESTONE
W.M.B.



HIGH RELIEF



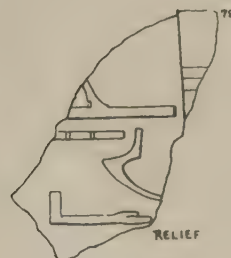
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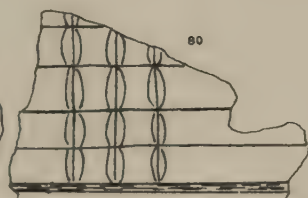
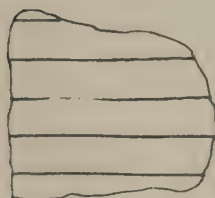
SUNK RELIEF



RELIEF



RELIEF



80



81

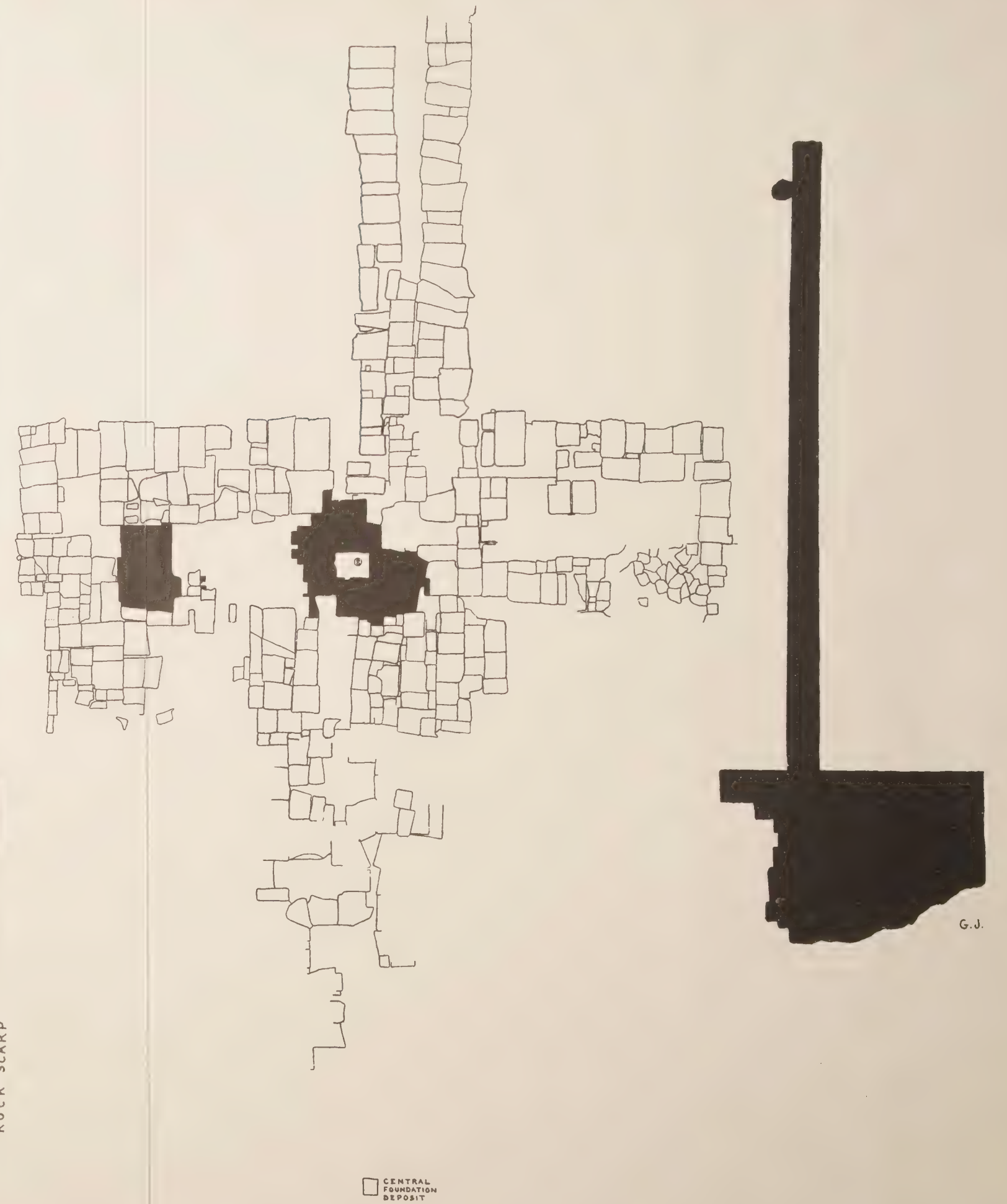
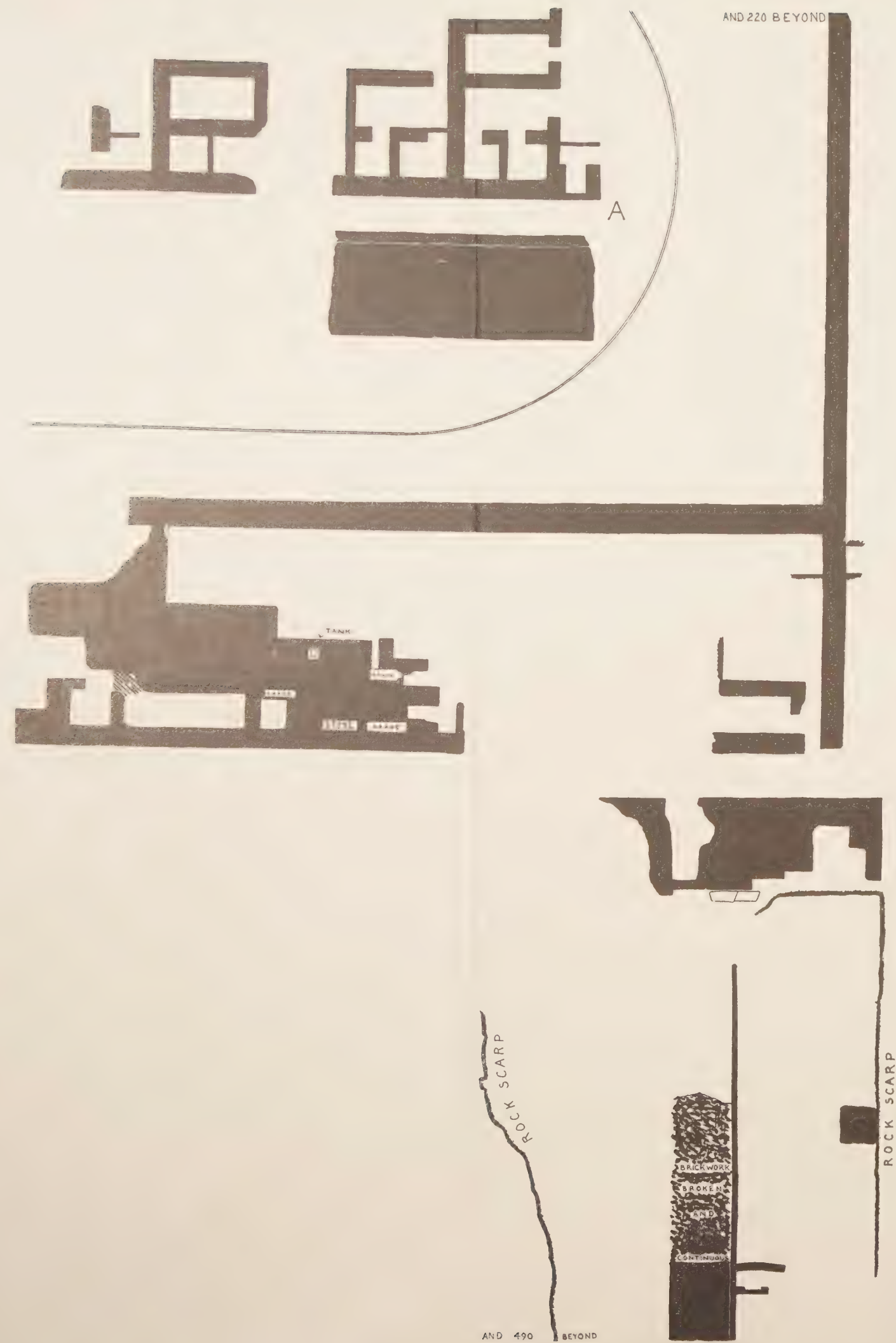


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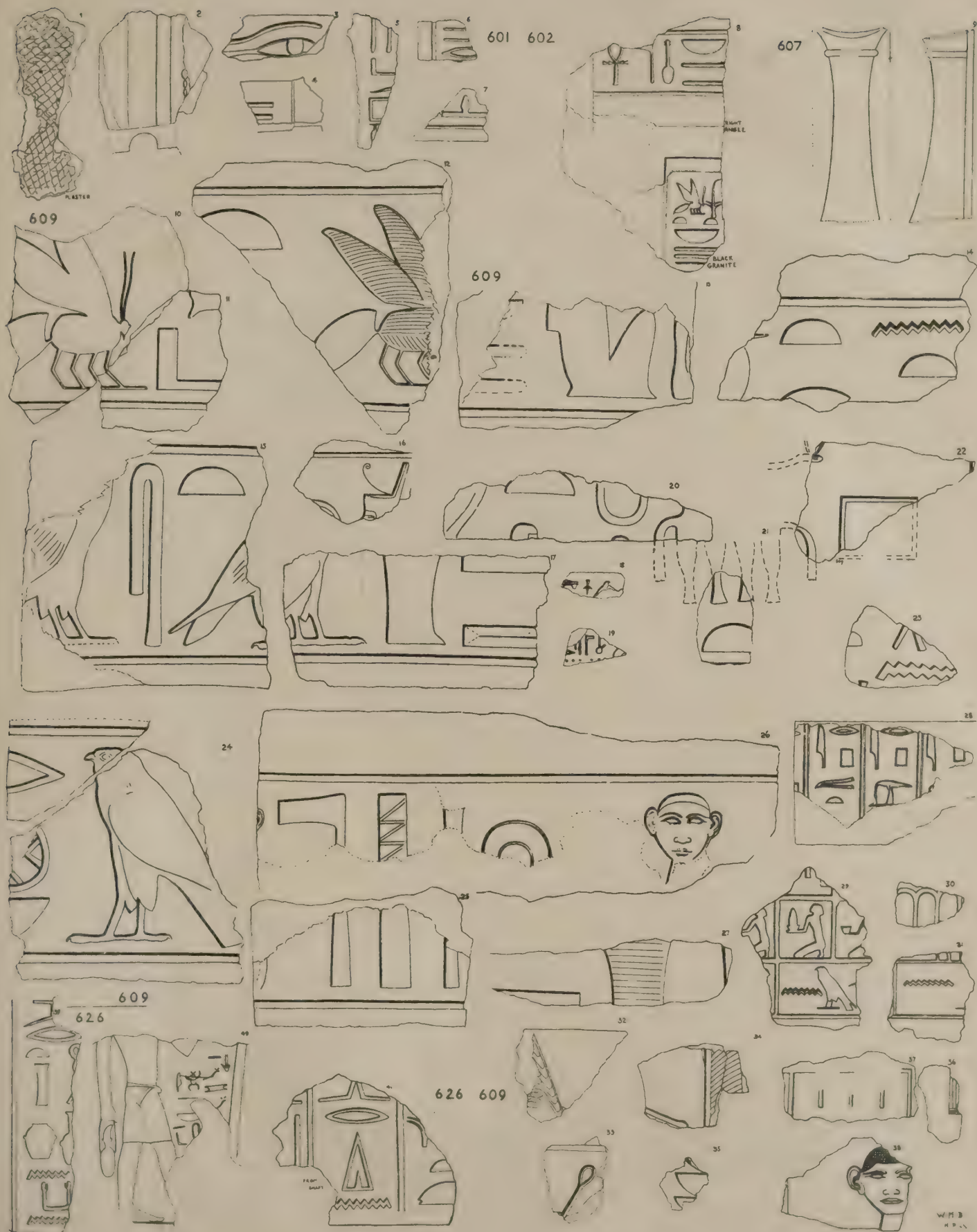


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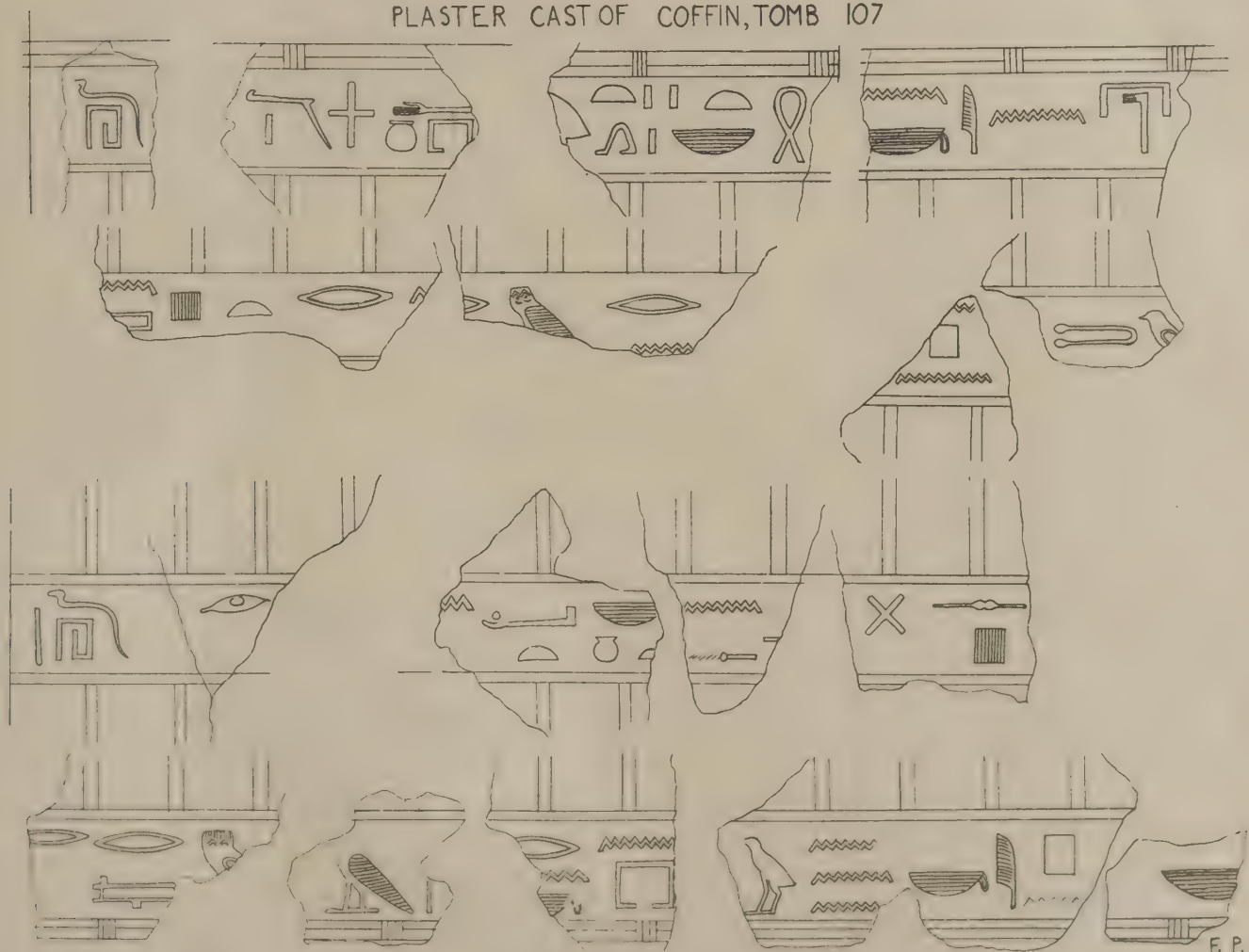


J.



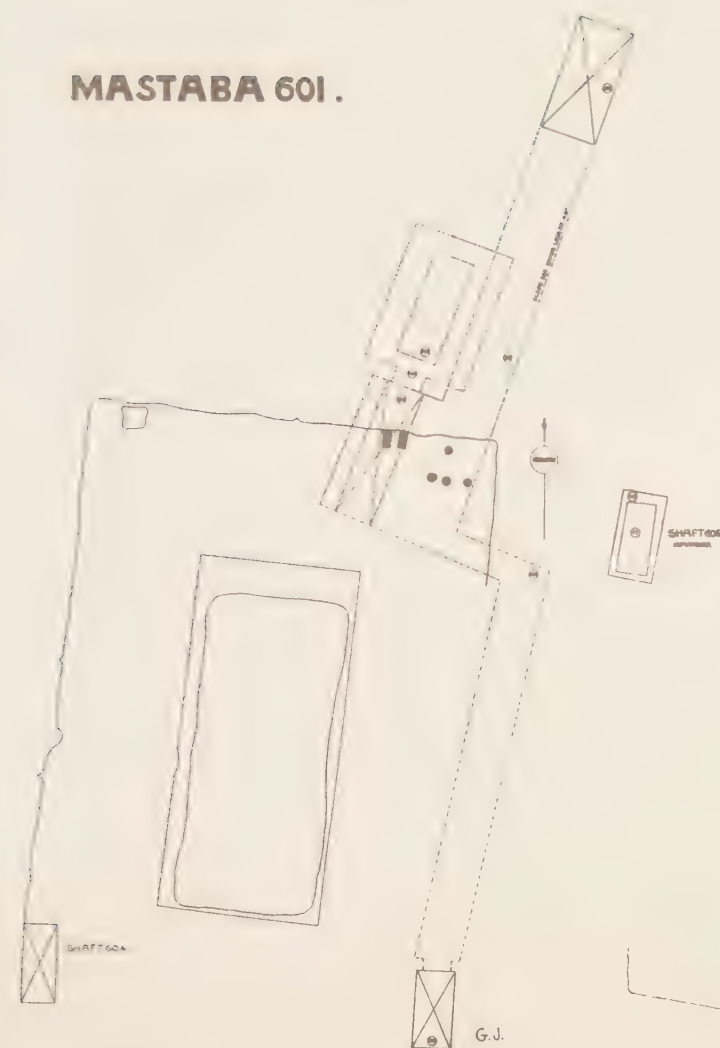


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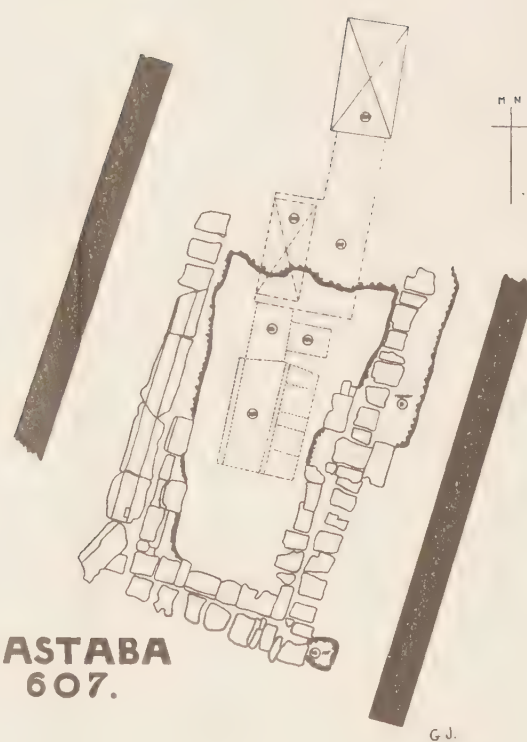




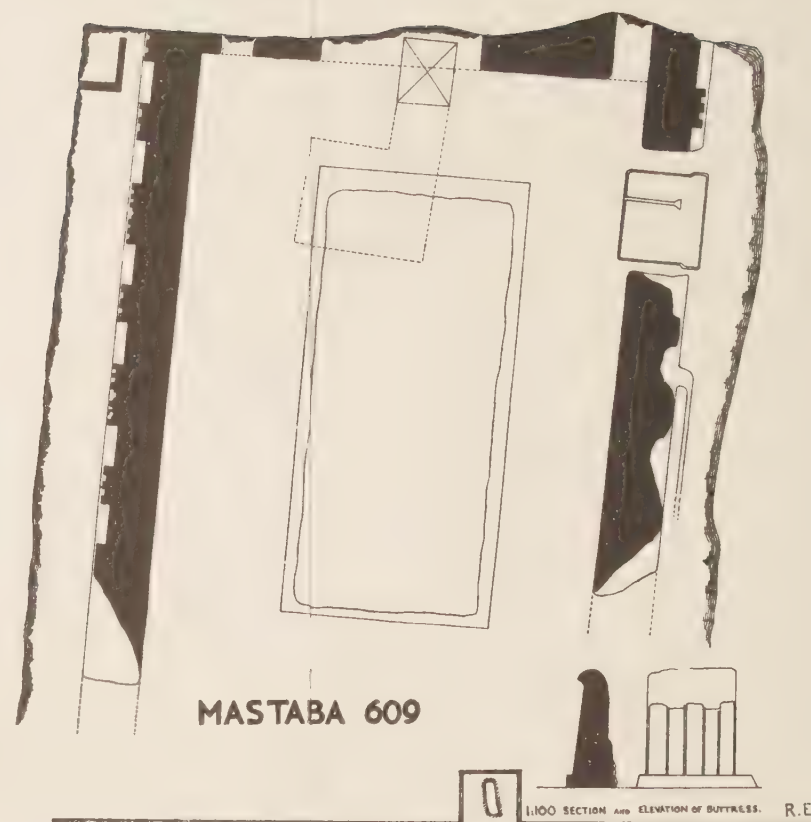
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MASTABA 607.



MASTABA 609

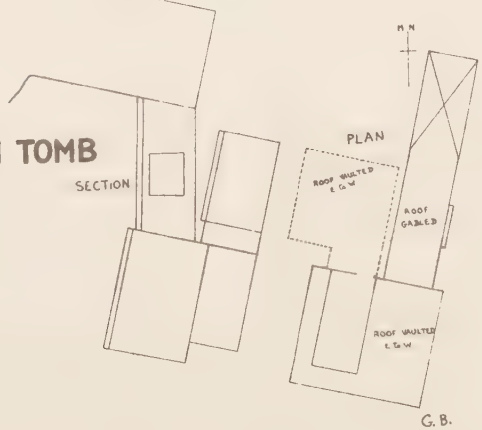


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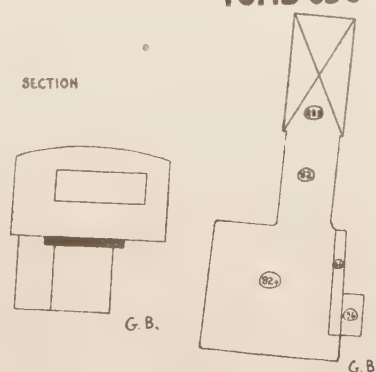


KILN TOMB

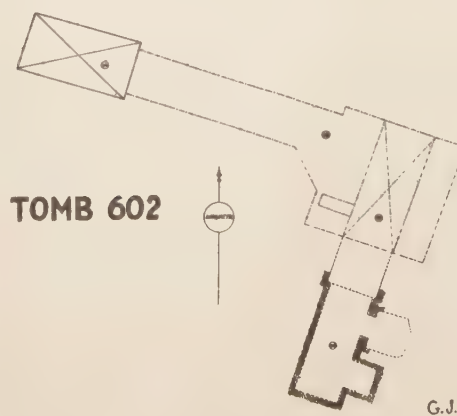
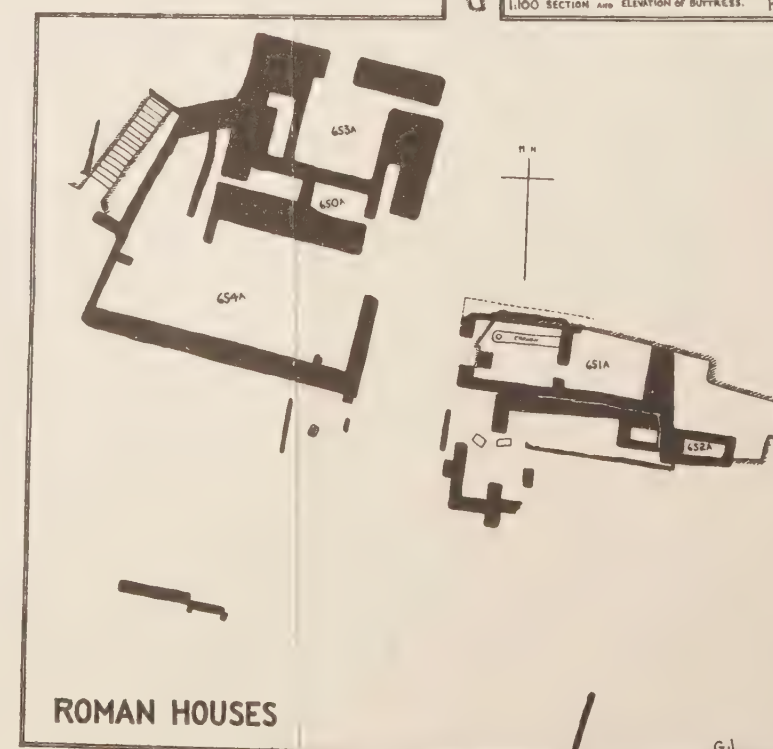
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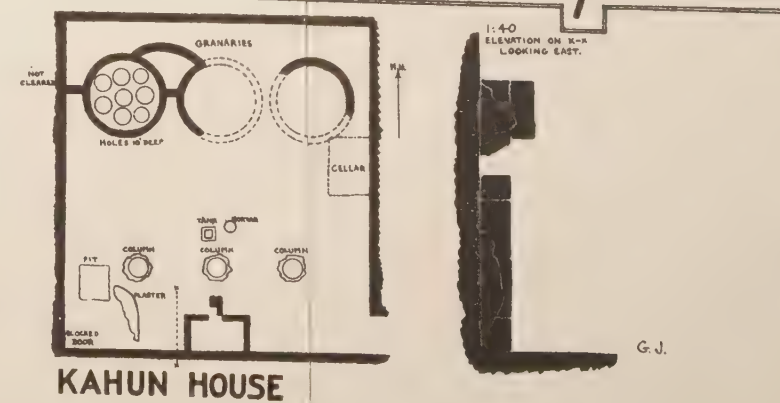
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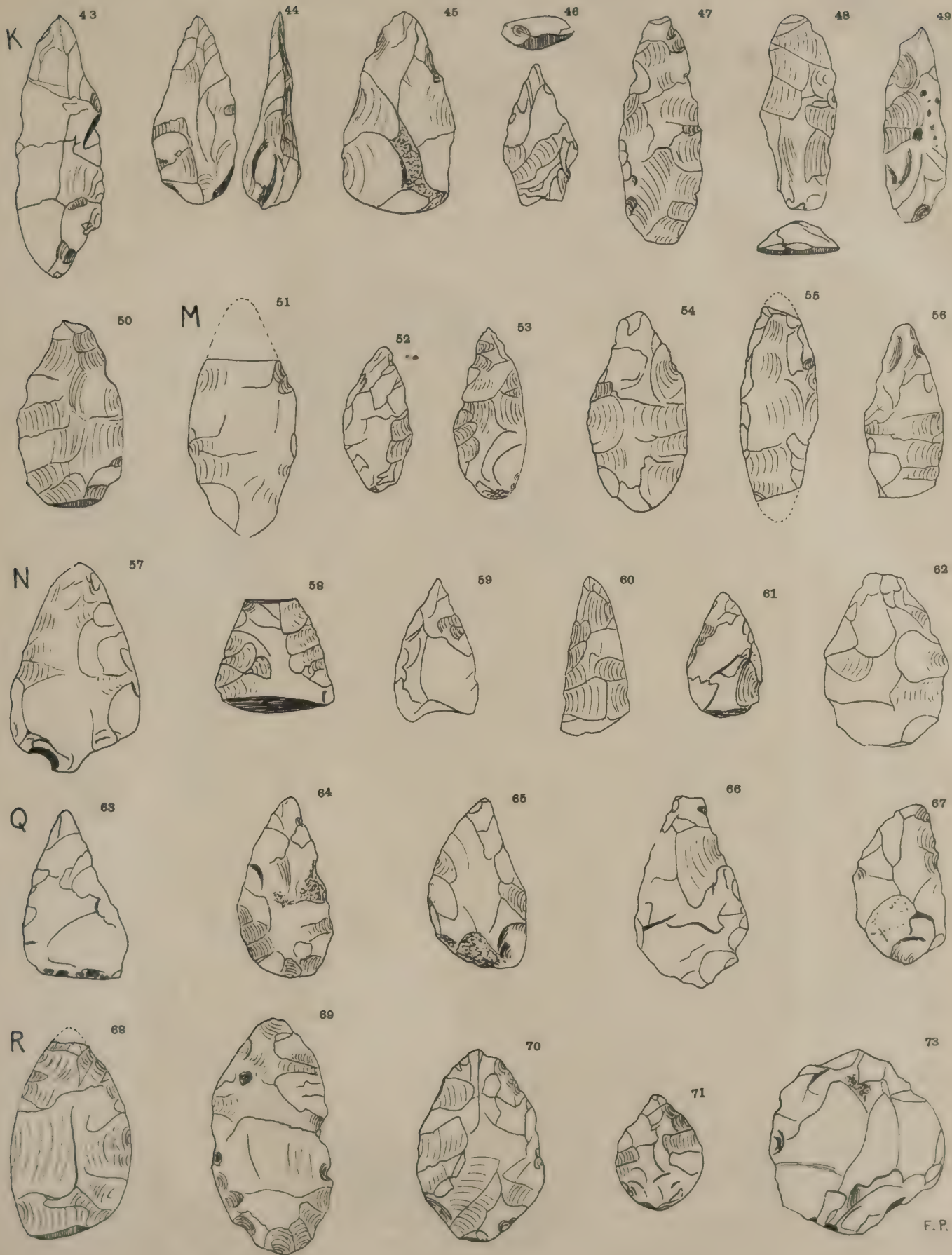
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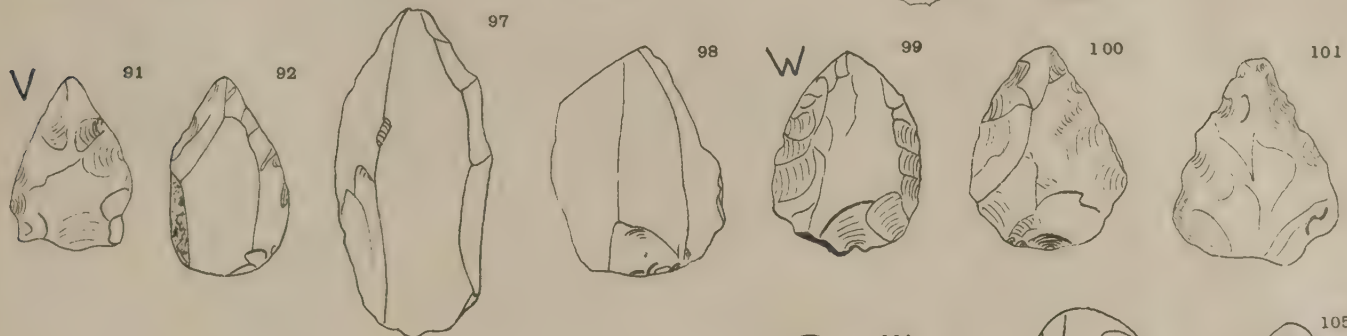
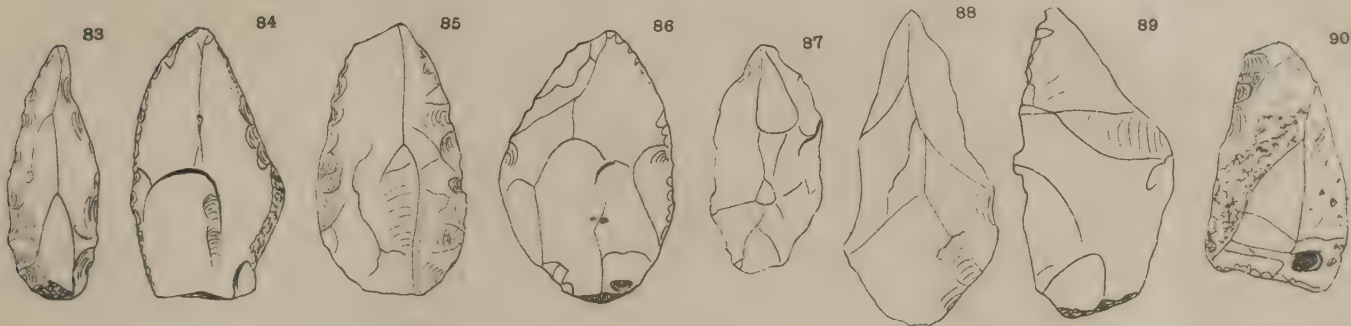
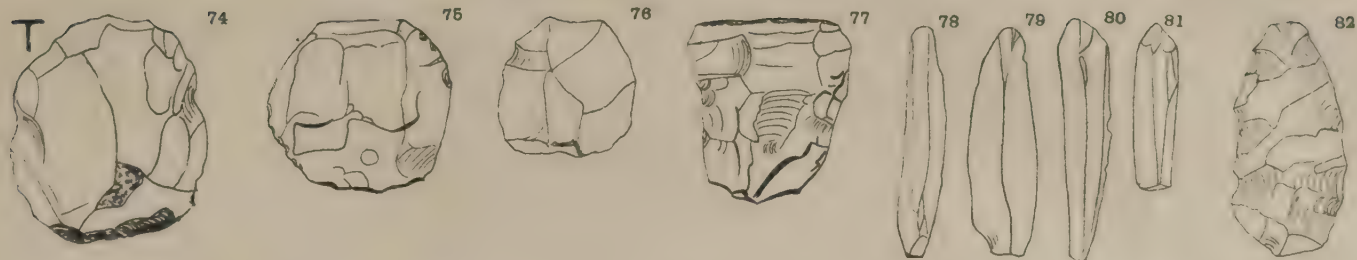
ROMAN HOUSES



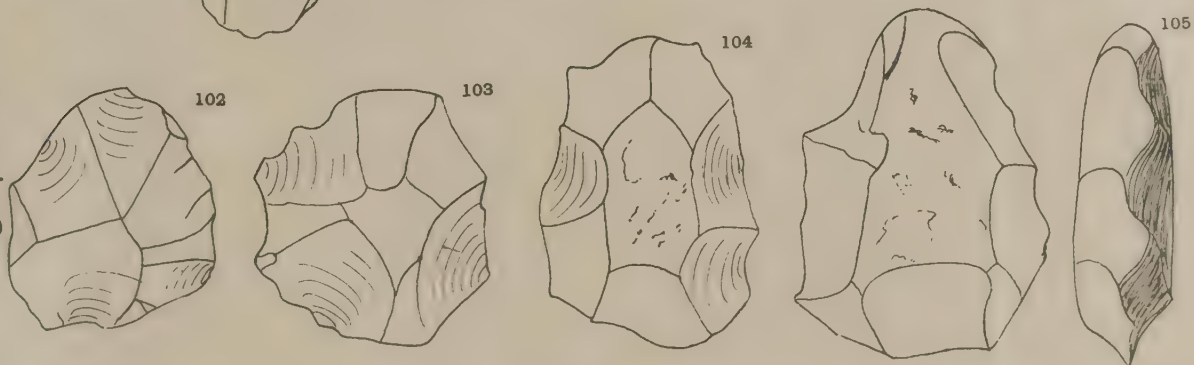
KAHUN HOUSE



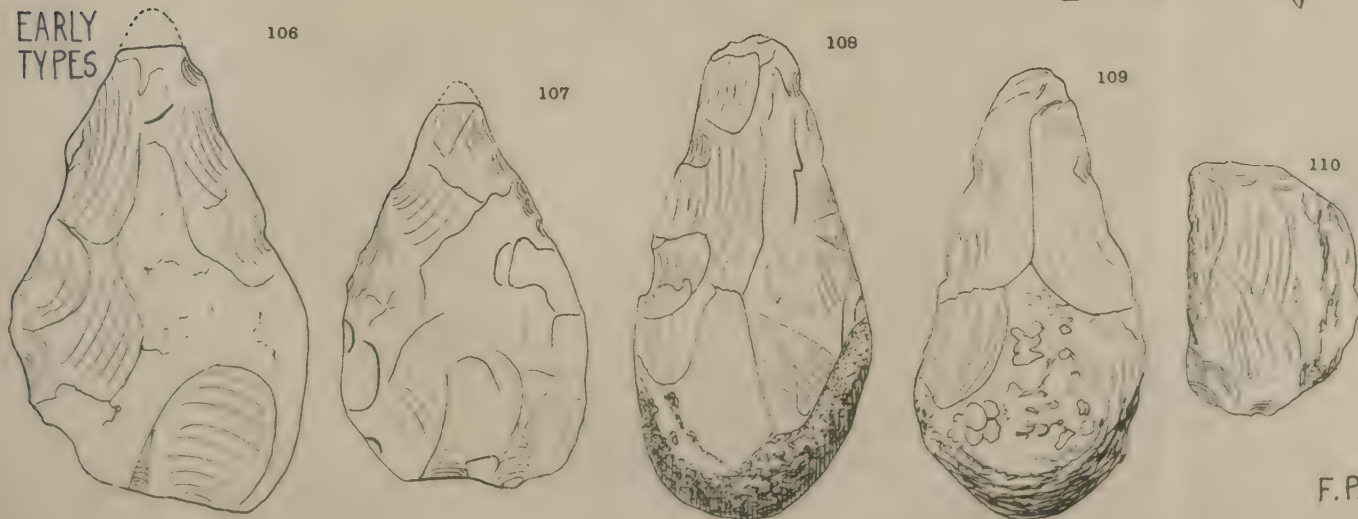




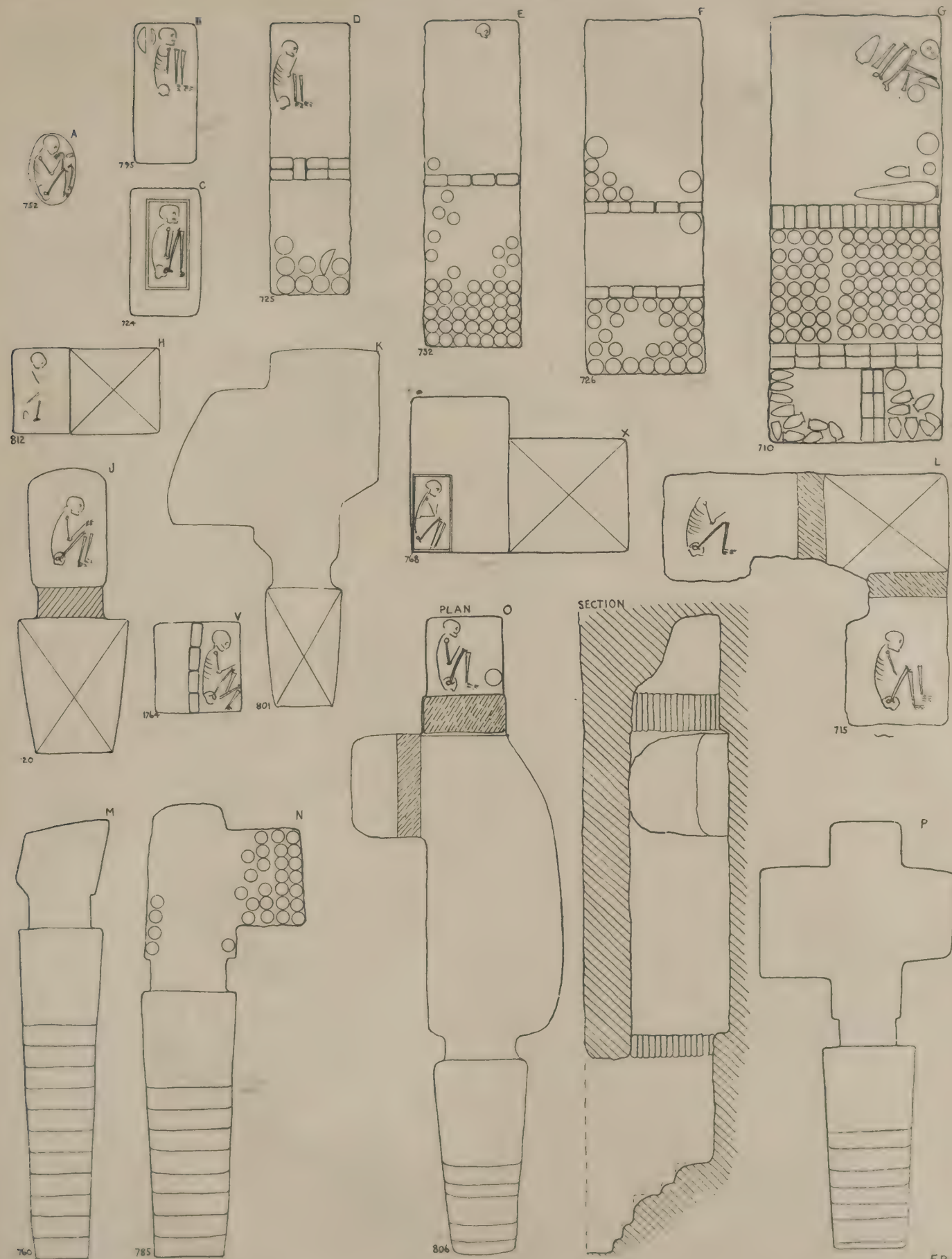
FLINTS
OF
GRANITE-
WORKERS

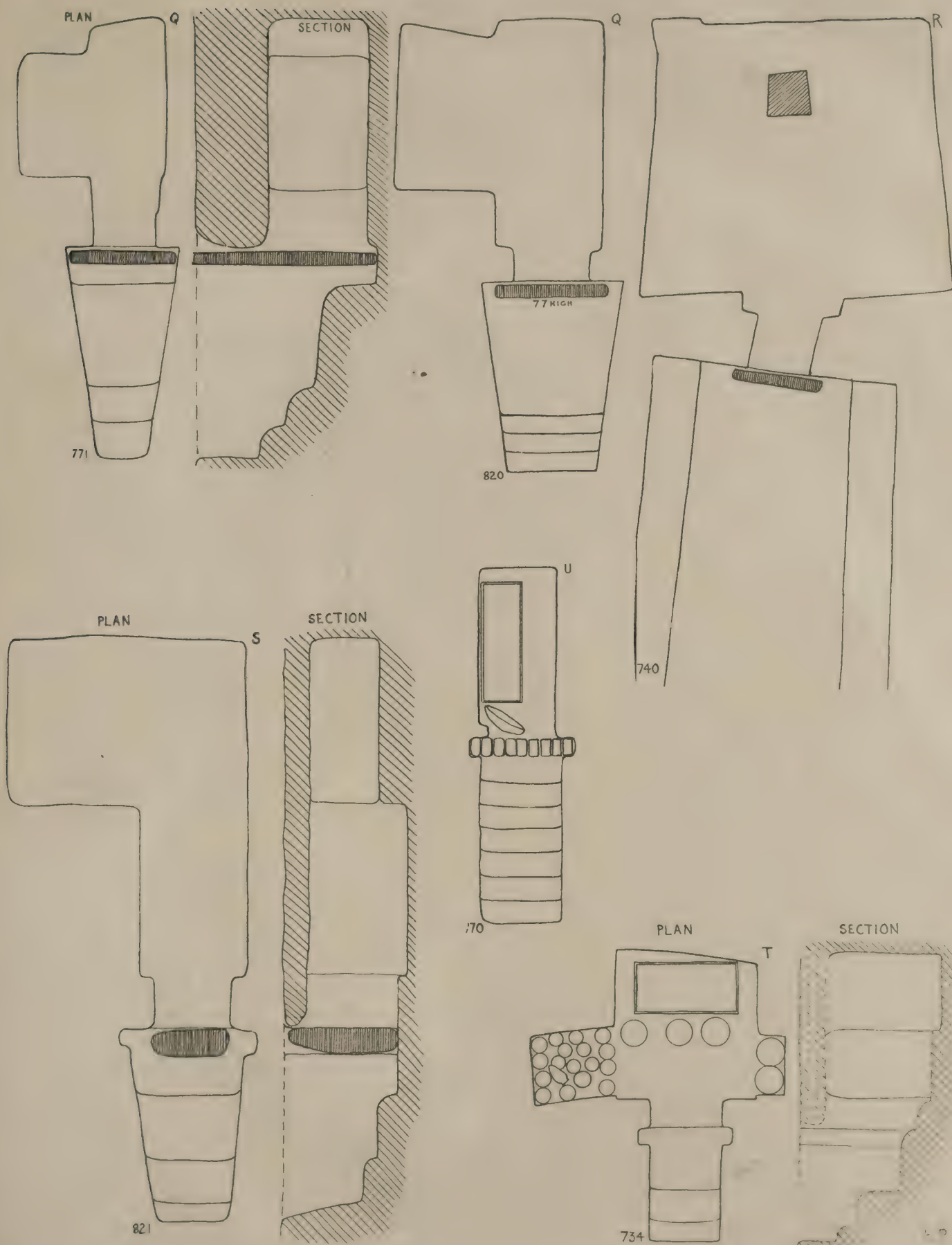


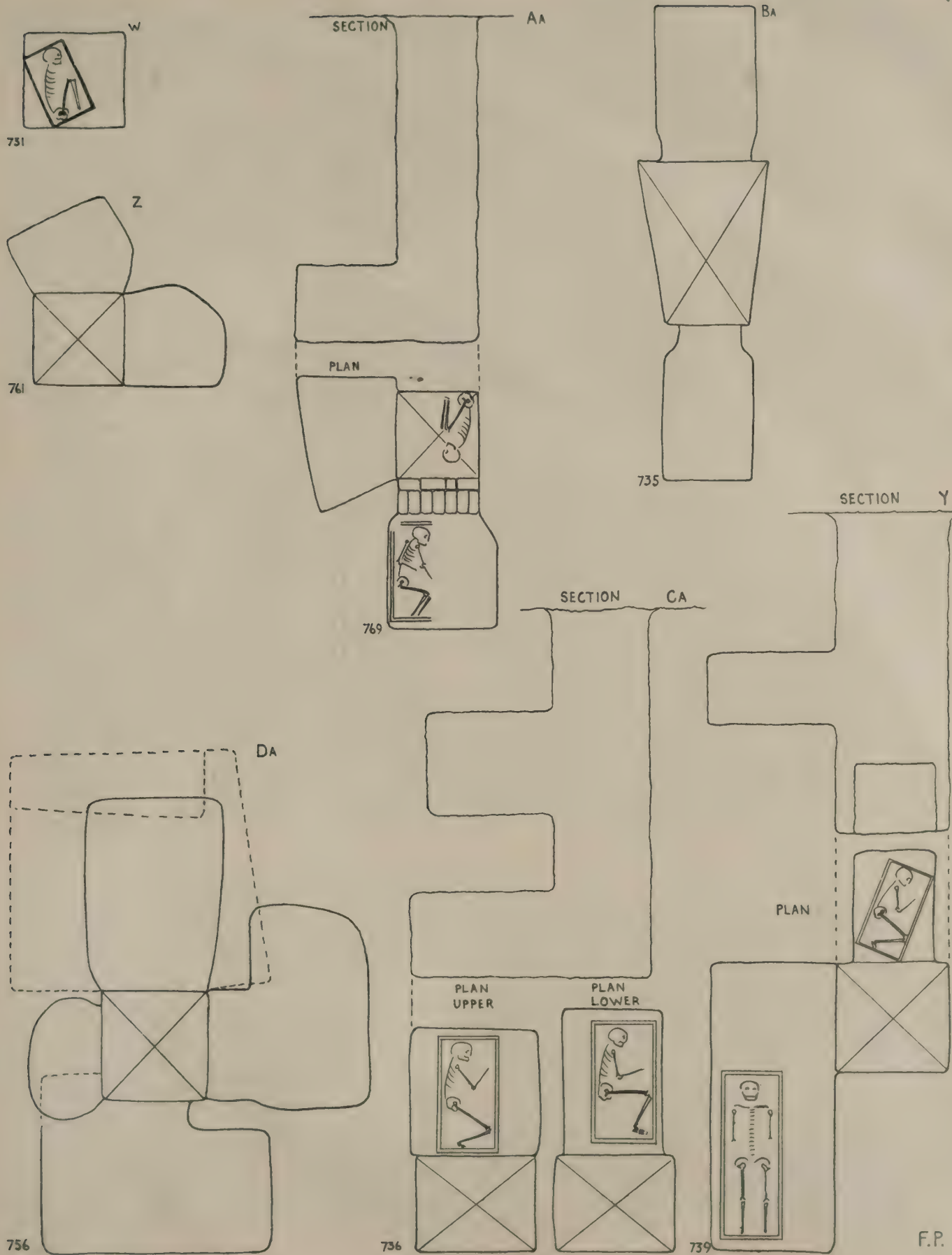
EARLY
TYPES

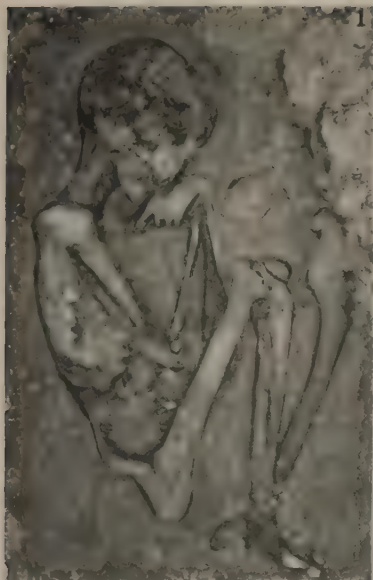












PREHISTORIC BURIAL, 752.



HORNS AS BOWS, 741. ALTAR, KAHUN.

LOTUS CUP, 743.



FIRST DYNASTY BURIAL, 757.



CHAPEL OF TOMB OF ANPY, 620.



SHRINE WITH COLUMNS, KAHUN.



OPEN GRAVES									
NO	GRAVE	AZ.	BODY	COFFIN	POTTERY	STONE	BEADS AND OTHER OBJECTS	BRICKS	
	N E D		S A T H F	L W H					
702	44 124 48	200			1H	63P64A	9P		
703	29 64 8	200		TRACE	12B	64A			
705	55 80	195		45 29			62E64HR	BEADS: 58D44, 68H 75FKMR 80DE 85R6	
706	35 60 50						9B	CLOTH	
707	45 80 50	195	M I N W	TRACE	3K (LH 2)				
708	25 45 18	190							
709	60 235 60	197	I N W		60E 63H 64A 64H 67JK 68M	6R 8X 9NB 13PV 16 22J 24N	CLOTH		
710	72 173 36	195	M?		1H 19T 20D	63H 64H 64A 64H 68M 765 90T	6F 9H 23K 61B 78M	IVORY COMB: SHELL BRACELET	
714	42 60 44	185	F 2 E S	NO	FRAGS.				
724	30 34 27	189	I N E	36 16					
725	34 115 32	188	F I N E	NO					
726	50 150 20	200		TRACE	20D 36C 41L 63HJ	67N 68M	93S	MUCH CLOTH. FLINT FLAKE PLX LVII	
732	40 138 20	200			59D 63H 67N 68M		SCRAPS		
733	29 37 31	190	I N E	NO		67N 67J			
743	38-29 68 33	195	F 2 N W				70 BT 9D		
748	33 69 39	200					13A	22 BTW 25S (LOTUS LV) 80T 80P	
749	24 49 18	195	C I N E	26 14			22J 42F 62B 78M	BL GL RING BEADS: CLOTH: 3R JUNT FLAMES: W/6 COPPER TOOLS: FLINT: 18A, 19V: 17E 18A 19V: 17E 18A 19V	
751	31 52 25	186			FRAGS.		19D	CLOTH: SHELL: COPPER SCRAP.	
752	HOLE 50	180	F I N E S	NO	PREH. 95A				
753	27 45 18	185	N	NO					
757	70 158 30	182	M		59D 63P	76M 94D 97C	BPV 22V 25R 52D 54LT 80FP	BEADS: 80BN	
775	33 45 20	185	M	TRACE				HEAD-REST (HELIO, KA, S. PLX VIII. 11)	
776	36 87 48	190			FRAGS.		9H	DUMMIES	
780	40 74 15	195	F I	BRICK: 44 16 22	FRAGS.				
781	40 60 20	205					6G	HEAD-REST LXIX.1	
782	21 52 18	195	M. I	34 20				MORTICE JOINTS  SLANT PEGS	
783	31 56 28	210	F?	TRACE	90?				
786	32 108 38	205	M I N	TRACE				HEAD-REST WITH 2 COLUMNS	
788	20 60 15	180	F?						
789	25 41 30	180							
793	36 70 31	185	C I N W	38 24 16			19D		
794	20 54 28	195	M I N	39 20 12					
795	26 59 38	200	M I N	NO	FRAGS.		6H	SHELL	
797	28 74 29	192	C I N E		17N				
798	32 53 44	205			FRAGS.				
799	26 47 25	195							
800	30 55 31	195	M I?	TRACE	FRAGS.				
803	45 89 29	200	M 2	TRACE				CLOTH. COFFIN TRENCH 31-57-B	
810	23-37 93 24-42	190	F 2 N E	TRACE				COPPER SCRAP.	
813	38 62 40	185			3R	41W	SCRAPS		
823	36 64 40	190							

SHALLOW SHAFTS WITH CHAMBERS										
NO.	SHAFT	CH.	CHAMBER	AZ.	BODY	COFFIN	POTTERY	STONE	OTHER OBJECTS	BRICKS
	N E D		N E H		S A T H F	L W H				
701	52 97 75	N	114 75	198			71 42 26	1H 3R	52H 60E 62H 64E 64H 67J 76Z 90B	
711	48 47 65	N	32 36-59	185	F 2 N E		42 19T 54S	67J	6R BT 21T 22J 24V	
713	42 134 43	S	39 24 22	185	C N E	TRACE	20D		54W 62C 63M	
715	49 49 45	E	54 49 56	205	I W N	NO	FRAGS.			SEA-SNAIL SHELL LARGE BIVALVE SHELL
716	48 50 50	N	37 43 50	180	I W N?	NO				
718	60 57 60	W	58 40 32	200	I N W?	NO	37R			
719	48 55 49	N	48 74 49	180	I N E		37S			
720	33 51 74	N	34 50 36	185	2 N E					
721	39 93 72	N	50 88	187			20D			
722	37 60 34	N	27 46	193	3 N E	TRACE				
762	36 71 54	N	31 36 33	170	M 2 N S	NO	90?			
768	50 48 74	W	41 66 43	160	M I N E	31 15 71	9L	24V 42F	81M	CLOTH: MATTING ON BOAT
798	34 48 63	S	35 53 39	175	F	TRACE		68T		
799	44 36 47	S	43 76 40	190			12P 17N	63Q 64M	8X	BLOCKING STONE GAZELLE? BONES OX? RIB
801	25-31 50 33	W	32 57	190				67G	SCRAPS	
812	38 36 54	W	24 34 45	180	F 2 N E	TRACE				
814		N	54 94 62		I S E	TRACE	12N	6A		
822	42 48 40	N	34 50 20	183						

SHALLOW SHAFTS WITH CHAMBERS

NO.	SHAFT	CH.	CHAMBER	AZ.	BODY	COFFIN	POTTERY	STONE	OTHER OBJECTS	BRICKS
	N E D	ON	N E H		S A T H F	L W H				
701	52 97 75	N	114 75	198	...	71 42 26	1H 3R	59H 60E 63H 64H 64A 64H 67JK 68M	6R 15T 21T 22J 24LV	54W 62CP 63M
711	48 47 65	N	32 36-59	185	F 2 N E		42 19T 54S	67N		
713	42 134 43	S	39 24 22	185	C I N E	TRACE	20D		SEA-SNAIL SHELL	10-52
715	49 49 45	E	54 49 56	205	I W N	NO	FRAGS.		LARGE BIVALVE SHELL	10-52
716	48 50 50	N	37 43 50	180	I W N	NO				10-52
718	60 57 60	W	58 40 32	200	I N W	NO	37R			
719	48 55 49	N	48 74 49	180	I N E		37S			
720	53 51 74	N	34 50 36	185	2 N E					
721	39 93 72	N	50 88	187	...		20D			
722	37 60 34	N	27 46	193	3 N E	TRACE		24V 42F	81M	
762	36 71 54	N	31 36 33	170	M 2 N S	NO	90?		CLOTH: MATTING ON	10-53
768	50 48 74	W	41 66 43	160	M I N E	31 15 71	9L		JOINT 	11-52
794	34 48 63	S	35 53 39	175	F	TRACE				
796	44 30 67	S	43 76 40	190	...		12P	63Q 64M	SCRAPS	
801	25-31 50 33	W	32 57	190	...		17N	67G	8X	
812	38 36 54	W	24 36 45	180	F 2 N E	TRACE			SCRAPS	
814	56 94 62	N	56 94 62		I S E	TRACE	12N	6A	BLOCKING STONE	
822	42 48 40	N	34 50 20	183	...				GAZELLE? BONES	

POTTERY AND STONE TYPES NOT ON PLATES LIH-LIV WILL BE FOUND IN TARKHAN II

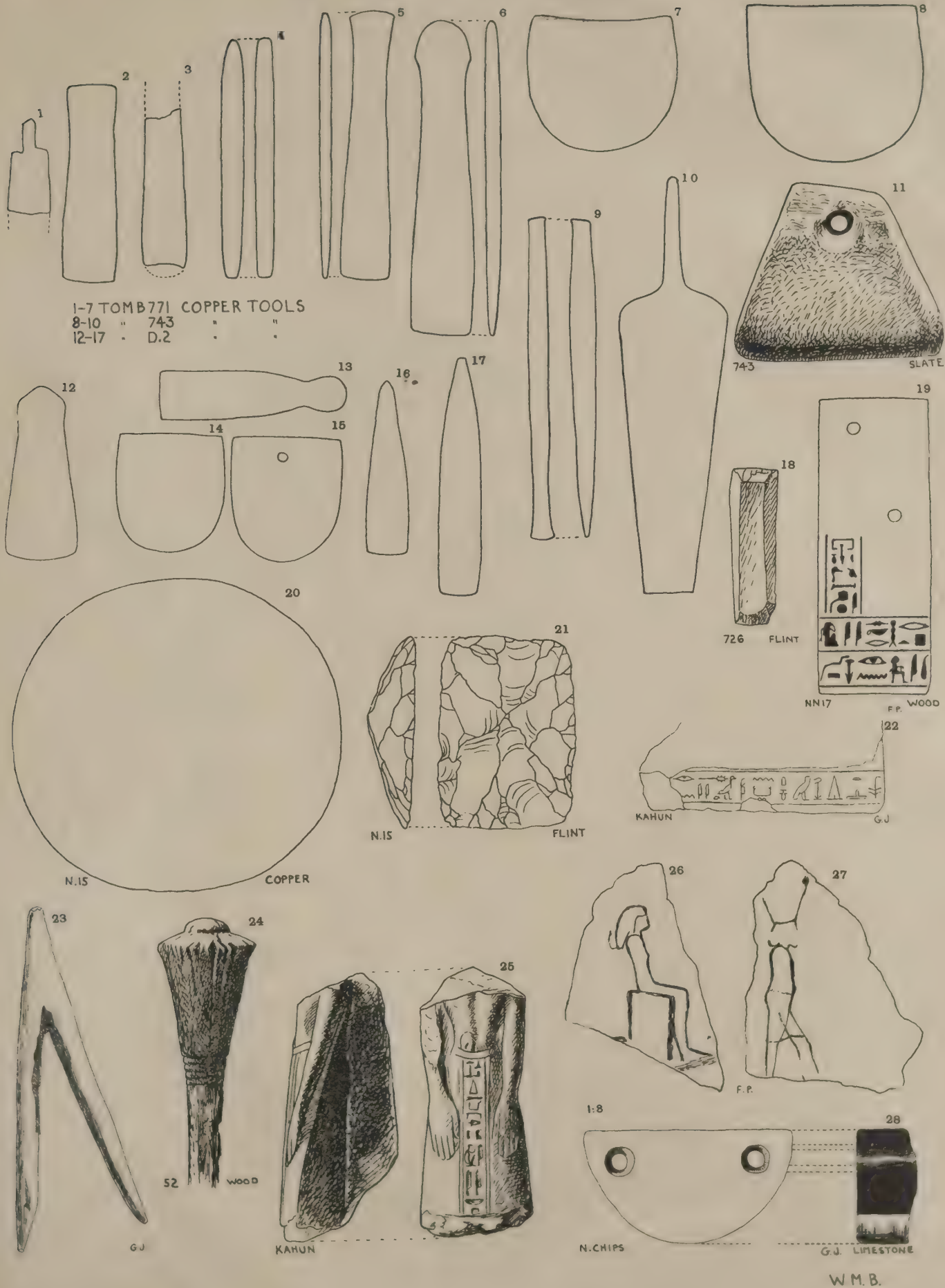
CHAMBERS WITH APPROACHES													
NO.	APPROACH W L D	CH. ON N E H	SLAB N E H	CH. ON N E H	CHAMBER N E H	AZ.	BODY S AT H F	COFFIN L W H	POTTERY	STONE	REMARKS	BRICKS	
704	28 65 70	3 +	0	N	36 80	200°	C 2 N E	TRACE	22M	66K 68M			
712	31 50 42	3 +	0	N	24 36								
717	27-40 136 52	1 +	+	N	42 100	193	M 4 N E	TRACE		56 24T			
727	44-60 85 83	5 0	0	N	94 224	188			1K3R 12N 16S	67N 100P	8B 54L	8 STEPS TO LOWER ROOM ON W. FACE OF SLAB	
				E	48 107 55								
				W	27 75								
				W	55 75								
728	41-57 91 80	2 0	0	N	43 79 40	190							
729	27-36 130 89	5 0	0	N	67 125 67	165				88M,			
730	34 76 53	1	UNFINI	SH	ED	150							
734	30 50 43	2 +	0	W	58 42	105	N?	44 22	3X 12P	63MH, P64M	76 9L 13V 22P	CRUCIFORM	
				N	13 25								
				S	28 30								
741	-34 67	0 0	0	S	84 164 67	160							
740	105 180 79	0 0	55 37 S	S	132 118 41	153							
744	30-40 83 114	5 0	0	N	30 78 46	185			9U	68T	FRAGS.	CENTRAL PILLAR CRUCIFORM 10 S 24	
				E	23 35								
				W	32 47								
745	27-42 85 60	4 +	0	N	47 84 68	196						10 S 3	
				W	40 52								
759	-65 165 120	9 0	0	N	85 145 70	180							
760	22-35 145 165	11 0	0	S	35 31 34	163						LATE CHAMBER BELOW	
770	35 77 88	6 +	BRICKED	S	32 72 37	200	I N	51 20	13A	63G, H	70M, 97M	19D 22T	
771	31-44 89 53	3 0	78 43 S	N	33 58 42	160	M	TRACE		67G	62M, 78TV	62TV, 64MS COPPER TOOLS PL. XLVII	
				W	30 45								
785	29-40 111 148	8 0	35 36 6	S	38 65 40	160	M I N		12UBA	54S 63GH, 60W, 64M, 66K, 67M	990	62M, 63M 11 S 3	
				W	29 36								
786	26-42 55 42	3 0	0	N	38 42 42	210?							
790	33 106	3 0	+	N	38 89 41	195		TRACE	5TS	68MT	8V DUMMIES		
				W	38 54 47								
792	28-37 65 45	2 0	25 30 S	N	36 63 30	185				67J	6CF 19D 21T	608 63J	
				W	40 47 30								
802	31-37 81 79	2 0	0	S	68 58 40	195	M I N	TRACE		68M	8V 10L 22T 42K	61K 78Q	
804	20-23 57 64	10 0	33 26 4	W	82 54	187						10RY VASE 62U: SHELL	
				N	50 18 13								
				S	50 8								
805	31-41 81 53	3 0	0	N	50 82 48	190			17N 41W	68M		COPPER SCRAP	
				W	30 50								
806	25-40 83 54	6 +	+	N	63 81 42	195			4DD	37E		10 S 34	
				N	32 33 25T		F 2 N E						
				W	32 44 21		M	TRACE					
807	36 116 31	10 0	0	N	39 20 13	190	F		FRAGS.	37E 38L	SCRAPS	COPPER: POTMARK PL. LIII 10 S 3	
808	31-62 254 136	12 0	0	N	TO WATER 70	192							
820	37-60 80 130	3 0	77 56	N	46 97	190							
				W	42 70								
821	32-45 77 48	3 +	54 33 11	N	50 142 42	197							
				W	50 60 30								
824	31-37 58 45	1 0	32 26 6	N	38 61 40								
871	35-43 65	2 0	0	N	48 65 75 40	190							

DEEP SHAFTS WITH CHAMBERS													
NO.	SHAFT N E D	CH. ON N E H	CHAMBER N E H	AZ.	BODY S AT H F	COFFIN L W H	POTTERY	BEADS AND OTHER OBJECTS	BRICKS				
731	42 40 156	E	38 102 38	173	I N E	32 17L 18	2K	67G	11 S 24				
735	37-51 68 112	N	41 65 39	185	M		3K 20D	67G?					
		S	38 45 37										
736	50 41 154	N	53 53 36	200	F 5 N E	24 13	9U	39D	10 S 24				
		86	41 61 43		M 4 N E	24							
737	36 60 172	N	44 69 34	175			9N						
		S	30 41 40										
739	48 45 87	W	52 120	205	M EXT. N	7H 26 19							
		132	N 36 47 28		M 4 N E	38 20			7 S 24				
746	36 91 156	N	UNFINISHED	167									
		S	54 94 54										
755	60 80 95	E	40 80 40	180									
756	44 46 104	W	33 56 51	196									
		114	E 44 72 54										
		168	S 75 75 42										
		192	N 90 100 46										
761	39 38 46	N	40 42 39	150	M 21 N E	TRACE			10 S 24				
		105	W PENTAGON 48										
		78	E 19 38		M								
763	39 32 135	W	35 64 32	180	M 5 N up		9U						
		161	S 57 24 26										
764	36 38 72	UNFINISHED	175	4 N E									
765	48 32 116	N	70 50 50	190	M?		9U?						
		W	33 33 30										
768	48 50 48	UNFINISHED	97				36M		10 S 24				
767	41 42 36	S	56 74 46	177	MC				10 S 24				
769	34 36 136	W	35 58 32	175	M 5 N E		9N		10 S 24				
		S	42 84 47		F 1 S	25 16							
772	84 34 111	W	19-26 42 37	175	F	TRACE							
773	41 42 96	N	41 45 40	160	M I	TRACE	FRAGS.						
777	46 45 120	N	37 37 28	195			37L (NOLED)	28L, 39G NOLED	10 S 24				
		W	42 49 39										
		S	53 57 50		M N								
778	38 39 113	W	31 56 35	160	F I N				12 S 24				
784	43 48 80	N	43 86 54	175									
		181	N 65 118 60										
		E	42 118 60										
		W	24 80 60										
871	42 43 10	W	27 52 31	200									
804	40 47 95	N	48 33 38	190	F I E S	TRACE	9U? 84M 57L (NOLED) 38D 39B						
		W	33 41 34		F I N E	TRACE							
815	46 69 115	UNFINISHED	185	MC			19T		3 LEDGES ON S. SIDE OF PIT LIKE VERY STEEP STEPS				

DEEP SHAFTS WITH CHAMBERS

NO.	SHAFT	CH. ON	CHAMBER	AZ.	BODY	COFFIN	POTTERY	BEADS AND OTHER OBJECTS	BRICKS
731	42 40 156	E	38 102 38	173	I N E	32 17L 18	2K	47G?	
735	37-51 68 112	N	41 65 39	185	M		3Q 20D	67G?	
			S	38 65 37					
736	50 41 154	N	53 53 36	200	F 5 N E	24 13	9U 39D		
			86	N	41 61 43				
737	36 60 172	N	44 69 34	173			9N		
			S	30 41 40					
739	48 45 87	W	52 120	205	M EXT. N	71L 26 19			
			132	N	36 47 28				
746	36 91 156	N	UNFINISHED	167	M 4 N E	38 20.			
			S	54 94 54					
753	60 80 95	E	40 80 40	180					
756	44 46 104	W	33 56 51	196					
			114	E	44 72 54				
			168	S	75 75 42				
			192	N	90 100 46				
761	39 38 48	N	40 42 39	150	M 2? N E	TRACE			
			103	W	PENTAGON 43				
			78	E	19 38				
763	39 32 135	W	35 64 32	180	M 5 N up		9U		
			161	S	57 24 26				
764	36 38 72	UN	FINISHED	175	4 N E				
765	48 52 216	N	30 50 50	180	M?		9U?		
			W	33 33 30					
766	48 50 48	UN	FINISHED	97			36M		
767	41 42 106	S	56 74 48	177	M				
769	34 56 136	W	35 58 32	175	M 5 N E		9N		
			S	42 84 47					
772	34 34 111	W	19-26 42 37	175	F	TRACE			
773	41 42 96	N	41 45 40	160	M I	TRACE	FRAGS.		
777	46 45 120	N	37 37 28	195			37L (MOLED)	28L 99G MOLED	
			W	42 49 39					
			S	53 57 50					
778	38 39 113	W	31 56 35	160	F I N				
784	43 48 80	N	43 86 54	175					
			18	N	55 118 60				
			E	42 118 60					
			W	24 80 60					
787	42 43 101	W	27 52 31	200					
836	40 47 95	N	46 33 38	190	F I E S	TRACE	9U? 84M 57L (MOLED) 38D 39D		
			W	33 41 34					
815	46 69 116	UN	FINISHED	165	M?		19T		

POTTERY AND STONE TYPES NOT ON PLATES LII-LIV WILL BE FOUND IN TARKHAN II.



TOMB POSITION	SHAFT CHAMBER	COFFIN	BODY	DYN.	POTTERY
	N E D N E M ON		POS. HD. FA. SK.		
1 DYKE RIDGE	60 35 40 - - -		EXT. E M		
2 E. OF KAHUN	42 78 180 108 108 36 S				XII. 23.5M, 17L
2A DO.	39 75 144 72 75 36 N				XII. 23.5M, 17L
	75 75 36 S				38R, 57/59M, 57L, 62, 67
50 GROUP NE OF TYR					XII. 58C,
52 DO					
55 DO					
57 DO					
59 DO					
101 KAHUN WADY S OF ROAD	40 95 185 90 110 65 S				
102 DO. N OF ROAD	40 95 140 105 85 60 S				
103 DO. DO.	50 90 160 104 100 70 S	FRAGS.			XII. 23.5M, 17L
	115 120 65 N				13FU 220 ? 418, 67, 70P, 908M
	45 90 50 N				
104 DO. DO.	45 100 150 42 110 48 S				XII. 67, 67M, 70C,
105 DO	50 95 140 85 120 55 N				
106 DO	40 95 160 60 80 60 S				PTOL. 23
	40 95 50 N				PTOL. 23, 24, 25, 29
107 DO. DO.	60 125 170 125 155 60 S				XII. 57 545 58P 67M, 88AA, 90M
108 DO	36 82 150 110 155 35 S				
	27 100 60 N				
109 DO.	45 95 130 45 80 42 S				
110 DO.	40 85 120 125 160 50 S				XII. 67M
	145 95 50 N				XVII. 3E, 70M
					XVIII. 70T
111 E. OF PYRAMID					
112 IMI.	LARGE	S EYES			
114 KAHUN WADY		CARTONNAGE EYE	XSO	PTOL. 1-11.	
115 DO					XII. 95D
116 DO	33 60 160 33 85 50 S				XII. 2E, 7L
					XVIII. 26Z, 67
118 DO.	45 100 150 90 90 70 S				XII. PTOL. 14, 15, 23
119 DO	? ? 30 - - -	NONE	EXT. W	F 2 UNDATEABLE POTS	
120 DO.	35 93 165 105 100 50+ S				
121	(80) 18 35 - - -	NONE	EXT. W		
122	(80) 118 50 - - -				
124	36 60 140 75 125 50 N				XII. 2Q, 67
					XII. 53L, 67
125					XII. 36C, 405S, 44E, 57, 60S, 70H, 67M, 70C, 67M
126	45 95 200 95 95 50 S				
127	52 90 120 40 85 60 S				
128					
129					
130	45 87 110 140 90 60 S				XII. 10M, 67M, 70C, 67M
	75 80 50 N				
131	? ? ? 140 100 60 S				XII. 5M, 33F, 56Z, 67L, 67S, 90Z
132	27 75 80 27 90 50 N				
133					
134 E OF PYRAMID	52 97 180 40 100 65 S				XII. 5M, 54, 58H, 71, 67L, 67S, 90Z
135					
136	35 70 105 80 90 50 S				XII. 5M, 7M, 74, 10C, 41L, 67S, 70J, 67M
	53 95 45 N				
138	? ? ? 115 108 65 S				
139	40 55 80 125 85 45 S	FRAGS.			XII. 49M, 67S, 70J, 67M
	80 85 45 N				
140 W. OF KAHUN WADY	LARGE				PTOL. 26 (POSSIBLY XXII)
141	40 95 120 85 100 64 S				XII. 67
	HOLE 60 N				
142	30 80 135 80 90 45 S				XII. 67
	110 90 45 N				
143					XII. 2A, 5D, 38Z, 49Z, 56, 49C, 58H, 67, 58H, 60EP, 75D, 80P, PHOTO PL. L
145					
400					
601 WEST RIDGE	PLAN PL. XXXVIA.				XII. 5H, 26H, 50P, 58, 67, 80P, PHOTO PL. L
602 DO DO	PLAN PL. XXXVIA.	PLAIN WOOD	MANY	20M 24P	
603 DO DO	PLAN PL. XXXVIA.			24P	
604 DO DO	108 114 576 70CULI				
NEAR 604 DO.	- - -	NO BURIAL			
605 SW OF PYRAMID.	35 95 140 85 85 45 S				
	? ? ? N				
606 WEST RIDGE	40 95 100 UNFINISHED	NO BONES			XII. 2B, 67
607 DO DO	PLAN PL. XXXVIA.				XII. 5P 14M 24KN CYPRIOTE SCRAP LXVII. 56, 70CD6M, 90M, 98M, 98M
608 NEAR DYKE	PLAN PL. XXVII				
608 (SHAFT TOMB)	PLAN PL. XXVII				
609 WEST RIDGE	PLAN PL. XXXVIA.	PLAIN WOOD EXT. N			XII. 5H, 36S 39M, 67, 57M 60P 70BHNQW
610 DO DO	40 85 234 104 102 49 S				
611		INLAID EYES			
613					
614					
616					
617					
618 WEST RIDGE	PLAN PL. XXVII.				
618A	? ? ? - - -	54x13x14	EXT. N E M	IX. LIKE HELIOP, K.A.G. TH. XXVII. 25.	
619 SW OF PYRAMID	48 48 144 108 117 2 N	NONE	EXT. N UP M		
	88 98 85 N				
619A					
620 WEST MILL	PLAN PL. XXVII.				XII. 5U 13E 30UM 33F, 58M 58H, 67D 703S, 88Z
620A NIZ.					
621 ROYAL TOMB					
621A					

POTTERY AND BEAD CORPUS TYPES TO BE FOUND IN OTHER VOLUMES ARE UNDERLINED: RIQQEH HARAGEH GUROB.

BEADS	OTHER OBJECTS	REMARKS	SECT	TOMB
XXII	SCARAB LXXII.29: COWRIES: SMALL RED AGATE PLAQUE. SCRAPS SILVER COWRIES? CLAY BALL.			1 2 2A
BALL CAR. AM. (XIII)				50
	SCARAB LXXII.2		81	52
	WOOD KNOB		91	55
			81	57
	CYLINDER LXXII.10		81	59
RING, EYL. GL. 13 BLUE, WHITE GLASS: A FEW STONE	2 SCARABS: FROM SCARAB: AMULETS PL. XLIX	2 BURIALS 120" DOWN IN SHAFT.		101
13 BARREL GL.	SCARAB: COWRIES.			102
BALL, CYL., FLAIL: ALL GL.		LOCULUS IN CHAMBER N' CENTRE N. WALL. BENCH IN ROOM S		103
				104
				105
		PIT IN ROOM 140X100X50		106
		TRENCH IN ROOM S 35X80X45		
	COPPER FRAG. OF PAINTED STELA: PLASTER-CAST OF INSCRIPTIONS	TRENCH 45X110X50 WITH CANOPIC RECESS 35X85X40 MID-EAST	73	107
RING, CYL. GL.		ROOM S VERY ROUGH.		108
		2 LITTLE PLATFORMS IN ANGLES OF ROOM N.		109
GL. & ROUGH CAR.	SCARAB: EYES: SHELLS: BRONZE RING: ROMAN COIN.	ROOM VERY ROUGH.		110
IN LAB: 1 QUARTZ: 1 AGATE.	2 SCARABOIDS: COWRIES: AMULETS PL. XLIX: ALAB. FRAG.	STONE JAMBS IN ROOM S		111
FEW.	POTTERY LAMPS: GLASS FRAGS: BRONZE SCRAPS.	ROOM VERY ROUGH: COFFIN TRENCH		112
	USHABTI.	STONE DOOR-JAMBS.	93	114
	SHELL.			115
				116
				118
	GLASS VASE LXX.15: BRONZIERING LXX.31: IVORY PIN LXX.18-20: COMBS: }			119
		DOWN TO WATER		120
				121
YES.	BRONZE RINGS: SHELLS.			122
				124
				125
				126
POOR GL.	GLASS.			127
	COWRIES: QUADRUPLE EYES.			128
POOR GL. & CAR.	LIMESTONE(?) FRAGS.			129
				130
POOR GL.				131
GL.	GOLD LEAF.			132
	GILT STONE(?) KNOB			133
FLAIL GL.	WOODEN CANOPIC HEAD.	CANOPIC RECESS ON E. 27x27x36		134
GL.				135
		TRENCH IN S. ROOM 22x80x35		136
RING SHELL, AGATE, CAR, ETC.	COPPER RING: COWRIES: SMALL SEMI-MET			138
				139
				140
GL. 1 CAR.	AMULETS PL. XLIX	DOWN TO WATER		141
	COWRIES	HOLE 70 DIAM: TRENCH IN W. OF ROOM S. 25x110x30		142
CYL. GL.: RING GL.				143
	STONE PALETTE: BONE HAND.	OFFERING RECESS ON E. 40x98x45: CANOPIC RECESS ON E. 35x27x27		145
				400
CYL. BLUE GL. RING BL. GL. & BLK. GL.: FEW STONE, CAR, RESIN, AGATE	6 SCARABS: COWRIES: SMALL SHELLS: GOLD-PLATED COPPER RING: AMULETS PL. XLIX: PL. LXXIII.33: ALABASTERS PL. LXXVII.36,37: ETC.		68	601
{ BARRELS, POLISHED CAR. & OR JASPER				602
{ CYL. GL. RING GL. BOTH BL. & WHITE ROUGH CAR: QUARTZ: PEBBLE PENDANTS	SHELLS: AMULETS PL. XLIX: PLAQUES: RINGS: 2 IRON SPEAR-HEADS: ALABASTERS PL. LXXVII.32-34 ETC.		907.4	603
{ CYL. BARREL, QATAR IN CAR: CALCITE: AMETH. ROUGH: PEBBLE: AGATE: RESIN	17 SCARABS: SHELLS: PLAQUES: AMULETS PL. XLIX: ALABASTERS }		907.5	604
{ GL. & BLUE PASTE: SILVER-PLATED BALL: LARGE CRYSTAL	SHELLS.	LOCULI VERY ROUGH: 87 LONG 38 WIDE: 2 ON S.E.W. 1 ON N.		605
{ SMALL GL.	CAR. HEART, GRN. GL. MENAT, PL. LXXVIII.21,22.	4 STEPS DOWN INTO ROOM S: TRENCH ON E.: LOCULUS ON W.		606
		POTTERY DUMP	68	607
{ CYL. CAR: BARREL GRN. FELSPAR. (XII)	POTMARKS PL. LIII.3-6		69	608
{ CYL. SMALL RING, BARREL, RING SPACER, ALL BL. GL. (XXII)	SEAL PL. LXXIII: RELIEF LAMP XXXIV: SHELLS: AMULETS XLIX: ALABASTERS LXXVII.31,38,44,45: SCHIST DISHES LXXIX.20,21: BL. GL. VASE LIKE LXXVI		86	609
{ CYL. DISK LOTUS FROM COWRY ALL BL. GL. CYL. GREY PASTE: BARREL CAR	5 SCARABS: SCARABOID LXXII.20: AMULETS XLIX: SHELLS: CAR. PLAQUE: BL. GL. SCRAPS: SCULPTURE XXXVI.			610
{ BALL CAR: QUARTZ, AMETH. RESIN: CALCITE: PEBBLES	ALABASTER LXXVI.9			611
{ BL. FELSPAR (XII). CYL. BL. GL.: DARK BL. & WHITE: QUARTZ: CYL.	3 PLAQUES: AMULETS XLIX: COWRIES: COPPER SCRAPS: BL. GL. VASE LXXVII.50: ALABASTERS LXXVI.23-4,28,30,35,39,40,42-3, 45-9,51-4. ETC.	SCULPTURE XXXIV. IMPRESSION OF COFFIN IN PITCH	91.67	612
{ BARREL, RING, ALL BL. GL. (XXII)	SHELLS, AMULETS XLIX: BL. GL. RINGS LXXIX.22: ALAB. SCRAPS.			613
{ BLK. BL. GL. LOTUS DROPS & ROSETTES BL. GL.: JASPER, CAR, CALCITE, GREY PASTE, RESIN.		TRENCH IN ROOM 27x82x26	76	614
	AMULETS XLIX: COWRY: PIERCED SLATE OBJECT.			615
				616
	COWRIES: SHELLS: AMULETS XLIX: ALAB. & BL. GL. SCRAPS:			617
	BLK. WHITE: YELLOW GLASS VASE: H. BRONZE ROD.			618
	BL. GL. EYE: ROUGH OFFERING TABLE.			619
{ CYL. DOUBLE RING, FLAIL, RING, BALL, ALL BL. GL. RING, BARREL, CAR:	BL. RING: AMULETS XLIX, LXXVII.2,7,8,11,14,15,16,37,40: HEDGEHOGS LXXIII.30	FOUNDATION DEPOSITS. PHOTO. XXV.12-15	70	620
{ BALL JASPER, HEXAG. CALCITE: PEBBLE DROPS.	SCARABS LXXII.30,31: GRN. GL. VASE: 2 GL. VASES LXXVII.49, LXXIX.23: STONE VASES (LXXI.24,27), LXXV.12,9: SHELLS: GOLD FOIL.	PLAIN MITRE JOINTS: UNDISTURBED	59	621
	35 WALKING STICK	TRENCH 33x87x20		622
				623
BL. GL.	SHELLS: EYE: GALENA.			624
{ KIL. FLAIL, BALL DROPS, ALL BL. GL.: CYL. BARREL, CAR. XVIII. SEED ROD, BALL	AMULETS XLIX: SHELLS: COWRIES: BRONZES: MEN: MODEL CORN: TRIDER.		60-5	625
{ SARD. XXII. BARREL, CYL. LOTUS DROPS, COG-WHEEL, ALL BL. GL. BARREL, CYL.	WOOD GIRDLE-TIE: ALAB. & GL. SCRAPS: FRAGS OF FOREIGN POTS:			626
{ BLUE PASTE: ROUGH CAR: HEXAG. CALCITE: PEBBLE DROPS.	SCARABS: ETC.			627
				628
FEW GL.	AMULETS XLIX.		33-6	629

VI-IX DYN. POTTERY TYPES WILL BE FOUND IN SEDIMENT.

TOMB POSITION	SHAFT CHAMBER	COFFIN	BODY	DYN.	POTTERY
	N E D N E M ON		POS. HD. FA. SK.		
622				RO. 25-42	
626				XII. 40	58C 57Z
650 WEST RIDGE.	PLAN. TL. XXXVIA.			XXII. 56 32	28M 30U 43N 30M 60M 70U 90U 986
650A ROMAN HOUSES.				RO. 30.51	60M 70BU
651 WEST RIDGE.	PLAN. TL. XXXVIA.			XXII. 53	
652 FAR WEST HILL.	60 120 492 163 103 82	8		XXII. 41M	WH. SET
653 NEAR 608	40 44 90 34 85 45	5	OBSCURE TOTAL	XXII. 25 LARGE DISH	
653A ROMAN HOUSES.					
654 DYKE RIDGE	SEE SECT. 66	EYE, WH. STONE		XXIII. 24M 37M 60M 70A 75MTU	LIKE 92T
DOME DOME ROCK	SEE SECT. 79			XXII. 25 2 41K 60DG 70M 75MTU	92T
		N.		XXIII. 24K. RED DEC. (TH. III) 6MT 60DG 80MT	
KILN E. OF WEST RIDGE	PLAN. TL. XXXVIA.	SCRAPS LXIX. 70		XXII. 5F 24M 30U 30U	
729 BASHKATIS	INTRUSIVE BURIALS.	TRACES	S	XXII. 25M	58B
741 DO.	DO. DO.			XXII. 25M	58B
746 DO.	DO. DO.			XXII. 25M	45G 58B
747 DO.	DO. DO.			XXII. 24Q	
756 DO.	DO. DO.			XXII. 24Q	60G 70K
759 DO.	DO. DO.			XXII. 24Q	58C
784 DO.	DO. DO.	PAINTED TRACE EXT.	3M 40	XXII. 24Q	30U
790 DO.	DO. DO.			XXII. 24Q	41M 50N
808 DO.	DO. DO.			XXII. 24Q	
851				XXII. 24Q	
900 E. OF KAHUN.		N.E.		XXII. 24Q	90E, 90F
901 NW. OF KAHUN.	37 79 140 40 80 41	8	PLASTER MASK	XXII. 24Q	62M 67M 90E, 90F
902 DO.	46 100 140 UNFIN.		SCRAPS.	XXII. 24Q	
903 DO.	59 91 318 80 86 51	5	WOOD	XXII. 24Q	58B, 63P 67M
	118 110 53	N		XXII. 24Q	
904 DO.	45 103 324 96 102 41	5		XXII. 24Q	
	40 100 47	5		XXII. 24Q	
905 DO.	52 108 312 110 101 94-100	5		XXII. 24Q	
	51 101 86	5		XXII. 24Q	
906 DO.	53 110 266 121 117 126	5	EYE	XXII. 24Q	
	52 95 48	8		XXII. 24Q	
907 DO.	33 88 201 113 104 49	5		XXII. 24Q	
908 DO.	34 91 248 81 104 65	5		XXII. 24Q	
909 DO.	60 75 96 UNFIN.			XXII. 24Q	
910 DO.	32 88 345 82 86 35	5	AT 231 DOWN	XXII. 24Q	
	44 91 45	5		XXII. 24Q	
	29 74 26	N	AT 196 DOWN	XXII. 24Q	
	41 93 54	N		XXII. 24Q	
913 DO.	32 90 352 117 96 47	5		XXII. 24Q	
	120 92 54	N		XXII. 24Q	
914 DO.	31 85 240 70 82 41	5	AT 200 DOWN	XXII. 24Q	
	60 82 41	N	TRACES	XXII. 24Q	
915 DO.	30 84 40	-	SEE REMARKS	XXII. 24Q	
916 DO.	33 82 218 110 87 41	5	WOOD: ALAB. 208 EYE	XXII. 24Q	
917 DO.	34 90 234 46 140 48	5	WOOD	XXII. 24Q	
918 E. OF PYRAMID.			EYE LXIX. 26	XXII. 24Q	
919 DO.	40 91 202 68 110 65	5		XXII. 24Q	
N1 BASHKATIS			STRAW MAT	XXII. 24Q	
N2 DYKE RIDGE (W)	45 51 24	-	WOOD 86x96 EXT. EUR C	XXII. 24Q	
N3 DO.			NONE.	XXII. 24Q	
N4 NEAR DYKE.			EYES (ALAB.)	XXII. 24Q	
N5 DYKE RIDGE (W)	33 115 0-20 50 88 40	N	4-STEPS	XXII. 24Q	
N6 DO.	42 43 102 14 45 34	W		XXII. 24Q	
N7 DO.	33 33 110 33 3 44	S	WOOD BEATO	XXII. 24Q	
N8 DO.	42 106 ? 59 89 40	5	V. BAD PAINTED	XXII. 24Q	
	53 42 40	5		XXII. 24Q	
N9 DO.	34 40 120 97 89 45	N	TRACES	XXII. 24Q	
	53 76 45	N	WOOD ANTHROPO. EXT. W.	XXII. 24Q	
N10 DO.	31 23 80 81 93 53	E	CARTONAGE EXT. N.	XXII. 24Q	
[N12-620]	79 82 44	W	MUD? EXT. N.	XXII. 24Q	
N11 E. OF WEST HILL	43 100 231	-		XXII. 24Q	
N13 NEAR DYKE				XXII. 24Q	
N14 E. OF WEST HILL	41 69 252 114 114 43	S	WOOD	XXII. 24Q	
N15 WEST HILL.				XXII. 24Q	
N17 SE. OF WEST HILL	SEE SECT. 82	EYE.		XXII. 24Q	
N18 S. OF WEST HILL	38 105 126 163 87 118	5	EYES: INSCRIBED.	XXII. 24Q	
	90 93 122	N	INSCRIBED	XXII. 24Q	
N19	33 122 43 103 89 63	5		XXII. 24Q	
D. O. W. OF DAMESHQIN.				XXII. 24Q	
D. 1 DAMESHQIN.	46 224 180 38 72 35	5	13 STEPS	XXII. 24Q	
	75 104 44	5		XXII. 24Q	
D. 2 DO.	PLAN. TL. XXXIII.			XXII. 24Q	
D. 3 DO.	65 120 132	-	NONE	XXII. 24Q	
D. 4 DO.	45 80 77 78 78 45	N	WOOD 66x?x?	XXII. 24Q	
K.I. 1 KOM EL ISWID	? ? ? 126 123 72	5		XXII. 24Q	
K.I. 2 DO.	94 90 43	5		XXII. 24Q	
	115 107 74	5		XXII. 24Q	
K.I. 3 DO.	50 94 194 114 113 53	N		XXII. 24Q	
	81 58 36	N		XXII. 24Q	
	125 116 66	5		XXII. 24Q	
K.I. 4 DO.	54 102 270 120 121 66	N	EYE, ALAB.	XXII. 24Q	
	98 99 66	5	POTTERY, ROUND END.	XXII. 24Q	
	122 118 69	5		XXII. 24Q	
K.I. 5 DO.	52 84 ? 58 92 52	N		XXII. 24Q	
	88 91 37	5		XXII. 24Q	
	82 59 34	5		XXII. 24Q	
K.I. 6 DO.	37 67 ? 28 76 31	N		XXII. 24Q	
K.I. 7 DO.	42 76 95 135 132 64	N	EYE, ALAB.	XXII. 24Q	
	134 ? 67	5		XXII. 24Q	
	107 55 82	5		XXII. 24Q	
K.I. 8 DO.	41 41 105 79 41 31	W		XXII. 24Q	
K.I. 9 DO.	40 45 55 34 112 42	W		XXII. 24Q	
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POTTERY AND BEAD CORPUS TYPES TO BE FOUND IN OTHER VOLUMES ARE UNDERLINED: RIQQEH, HARAGEH, GUROB.

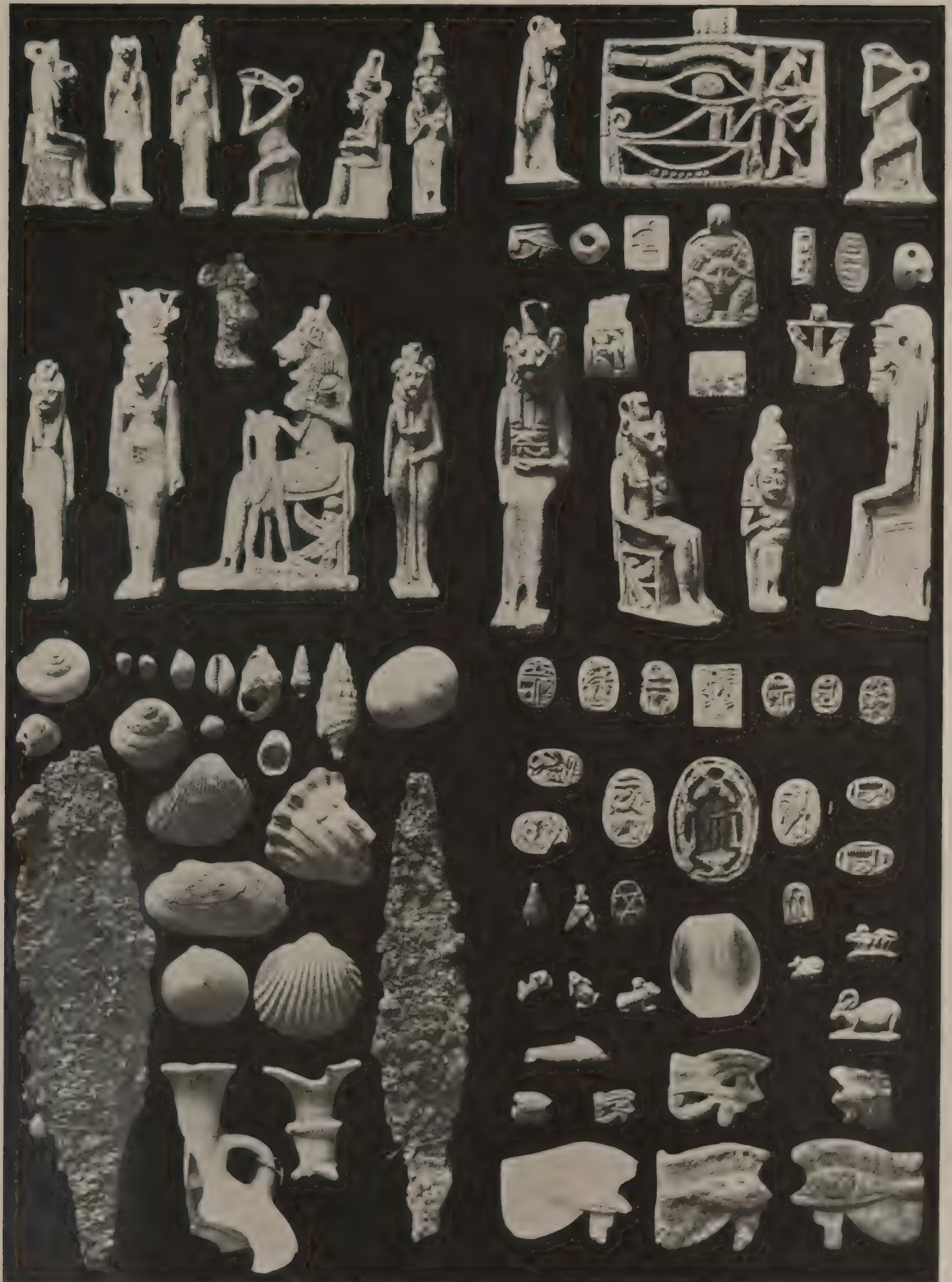
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101		1	1									1					+																									4+	
110																	+																									+	
138		+																																								+	
140				1																					1			1														3	
601	6	2	1	1											1		1				1							1	1									1			17		
602	2	2			1					1					1		2																					1				10	
603	6	1		2							1				1	1	7			1						1	2		2				1	1								27	
NR 604																		1																							2		
607																	1																									1	
608	3			2								2	2	1			26	1				3									1		2	1							44		
609	3			1							1	4		1	3		8					1																				22	
610	2											1					2						1																			6	
613				1													1																									2	
616				2													10								1																	13	
617																	1																									1	
618	3	3	2		1	1						2					9					1	1				1		1	1												26	
619																	1																									1	
620		1										3			1		6					2						1														14	
621				2																																						2	
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651		2	1		3												1					1																1				9	
652		1										1																														2	
654	1								1								3											1														6	
DOMES	+											+																														+	
DOMEN	5						1	1			2			1					1			1	2						1				2	2	1		2					22	
KILN	1																																										1
746				2								2					12					1																					17
747																	5					2				1		1															9
759		1			1	2						3					7					1			1																		16
784				1													+								1																		2+
851												1					2																										3
N 2	1													1																												3	
N 7					1	1						2					2								1																	7	
N 9						1						1					1																									3	
N 11	1		1		1			2					1				+	1				2											2		1	1		1				14+	
N 13																	1																										1
N 14																	1												1														2
N 18																	1																										3
N 19		2			1							2					+								2																		8+
	34+14+	8	6	18	5	1	1	3	2	2	27	3	2	9	1	113+	3	1	1	1	14	3	2	8	2	3	5	5	2	2	1	1	8	1	5	3	1	3	1				326

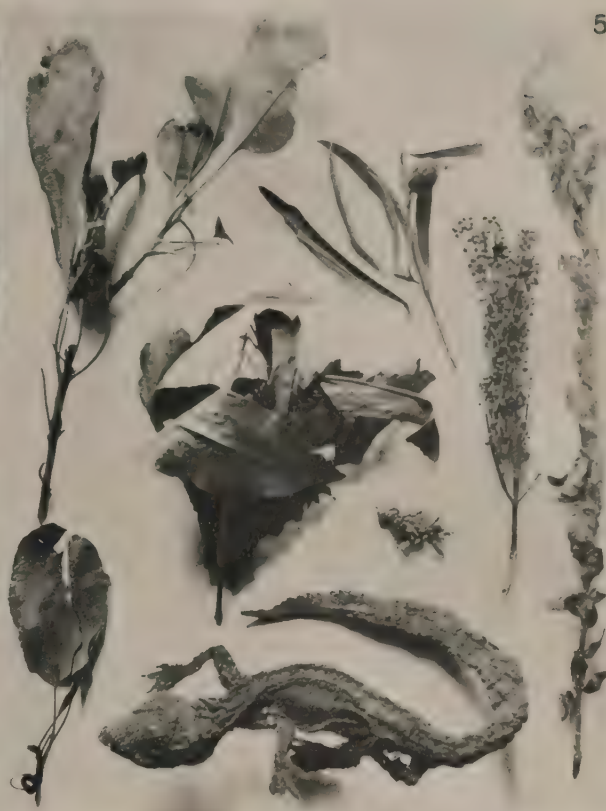
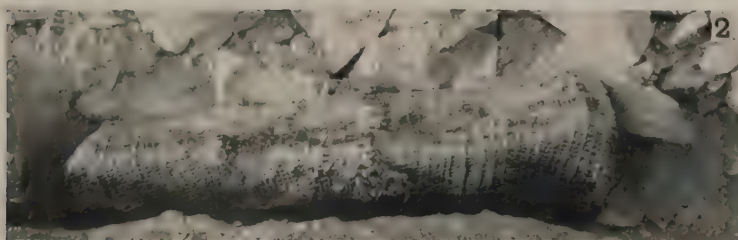
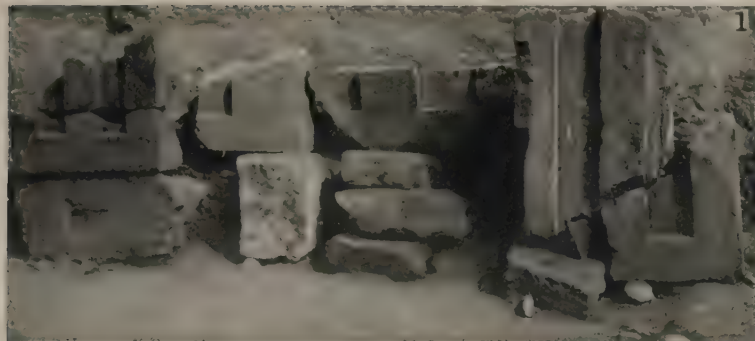
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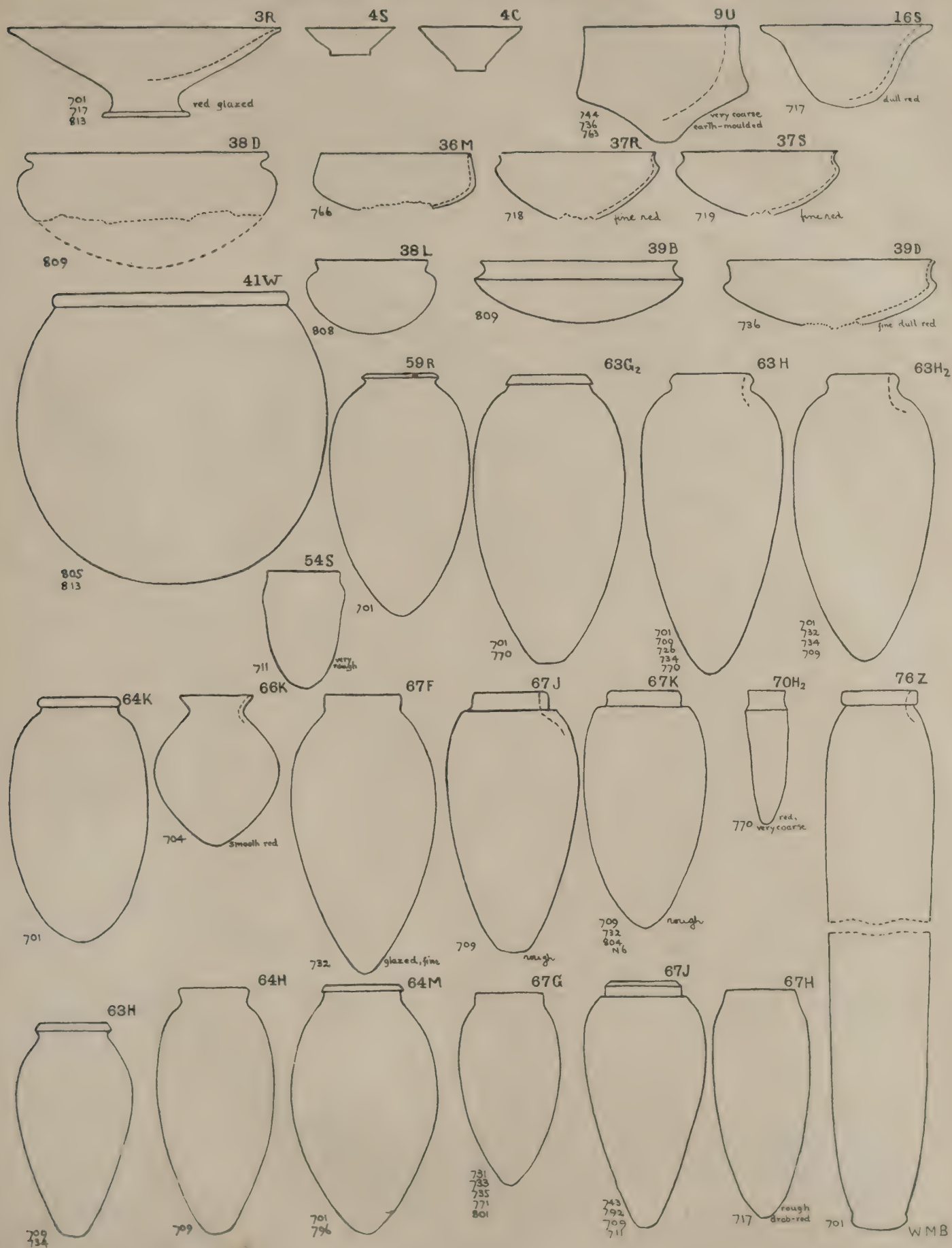
XII DYNASTY LIMESTONE OSTRACON

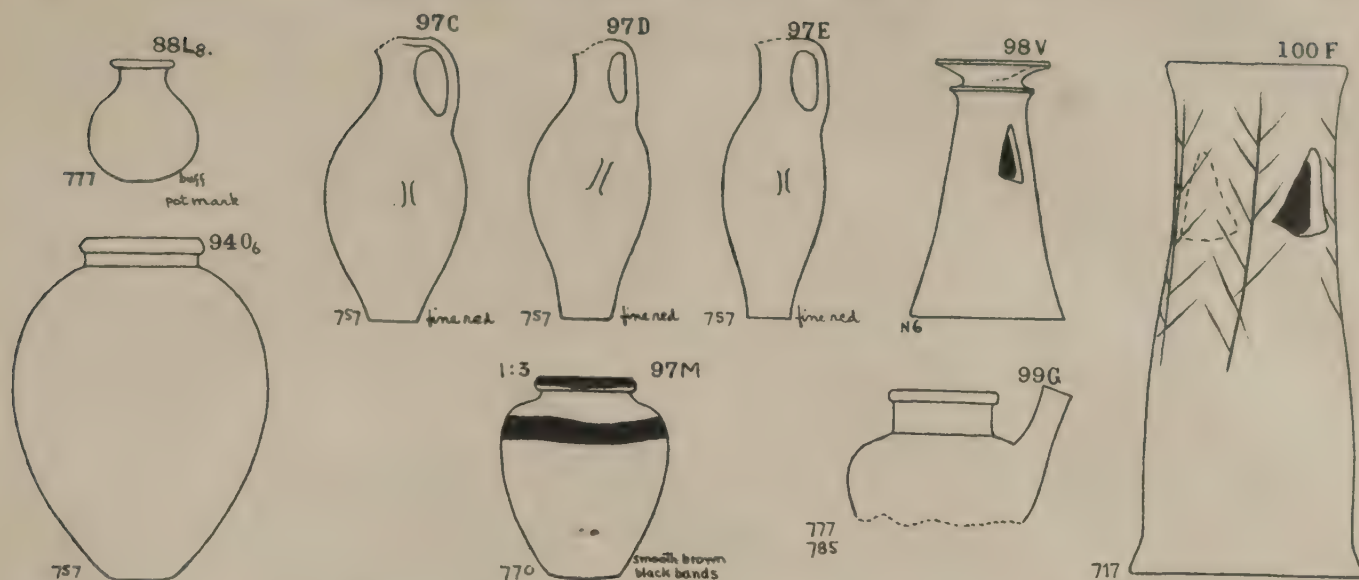
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137-138
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2:3

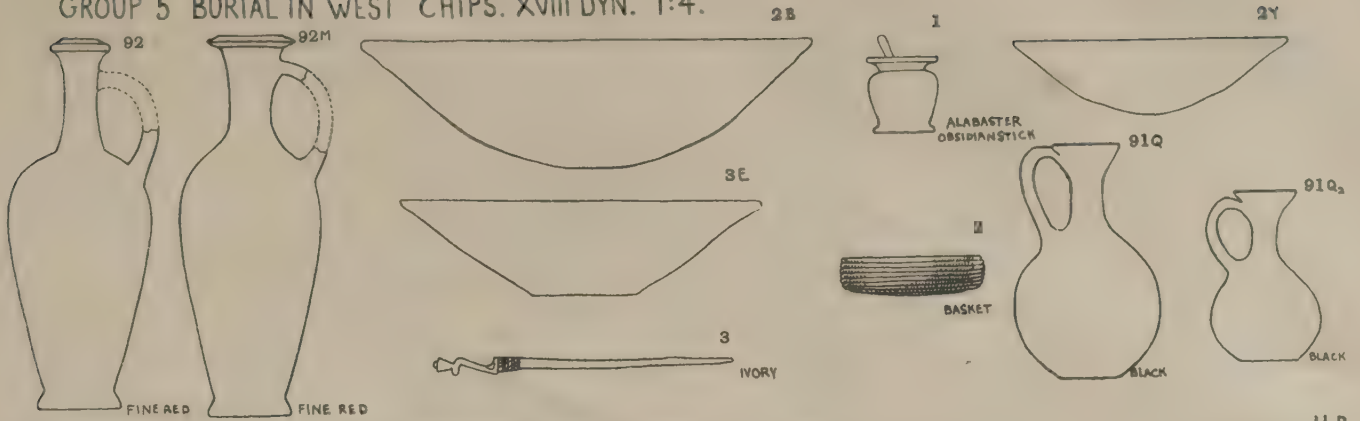
POT MARKS

PROTO. AND XII DYN.





GROUP 5 BURIAL IN WEST CHIPS. XVIII DYN. 1:4.



H.P.

GROUP 651 SHASHANQ I. 1:1 STONE 1:4 POTTERY 1:8



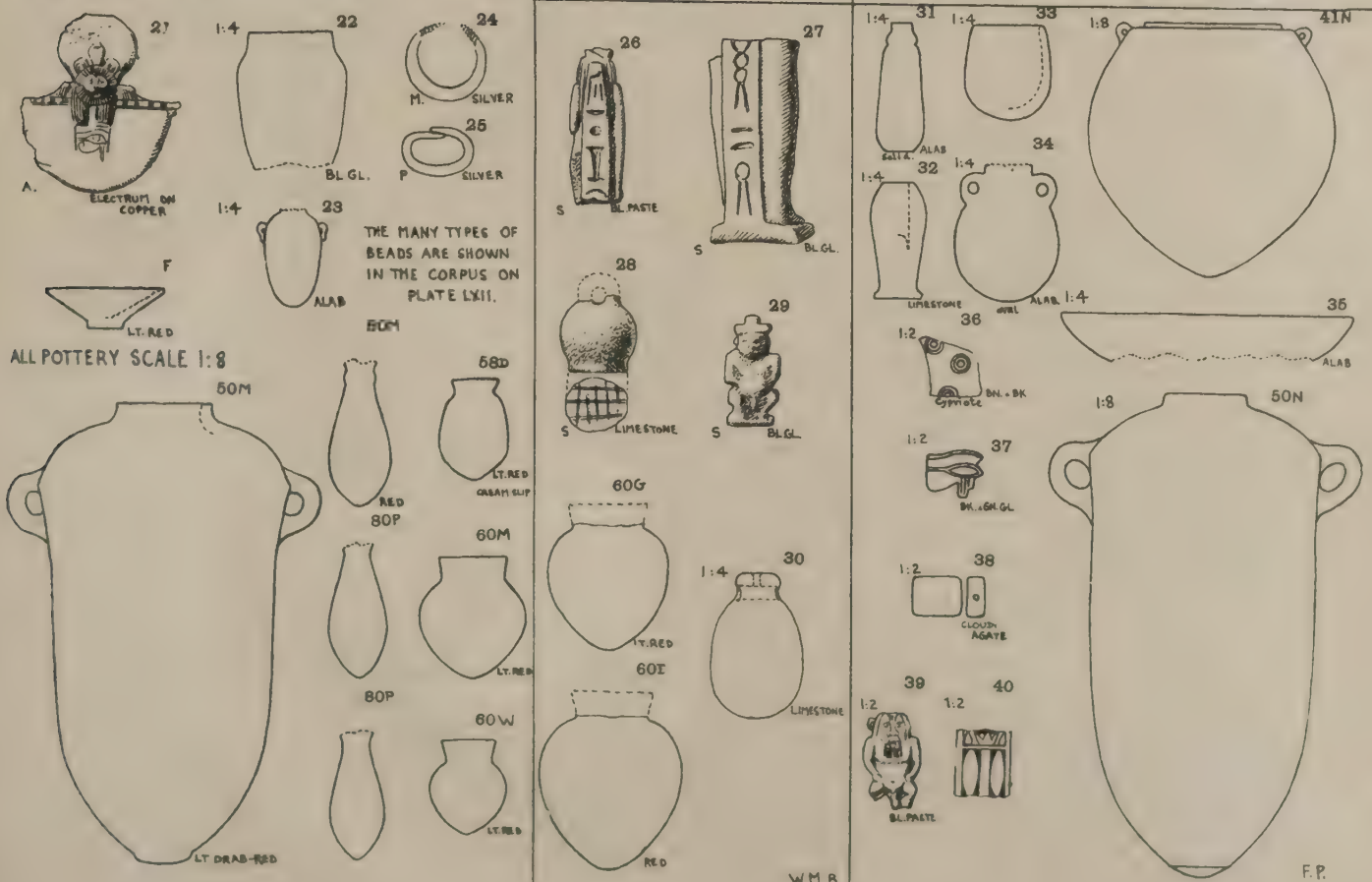
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GROUP DOME (NORTH)



GROUP DOME (SOUTH)

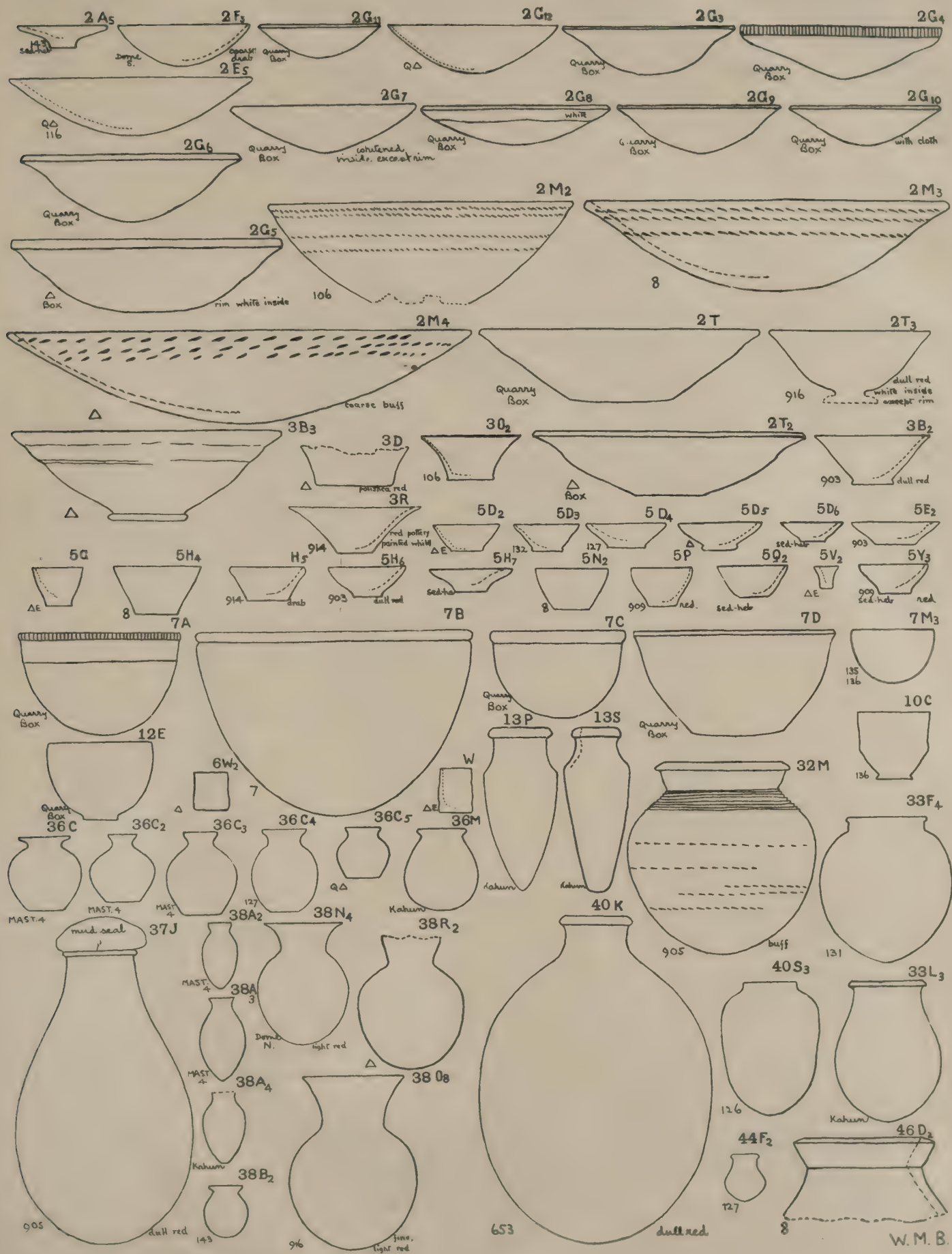
GROUP 851



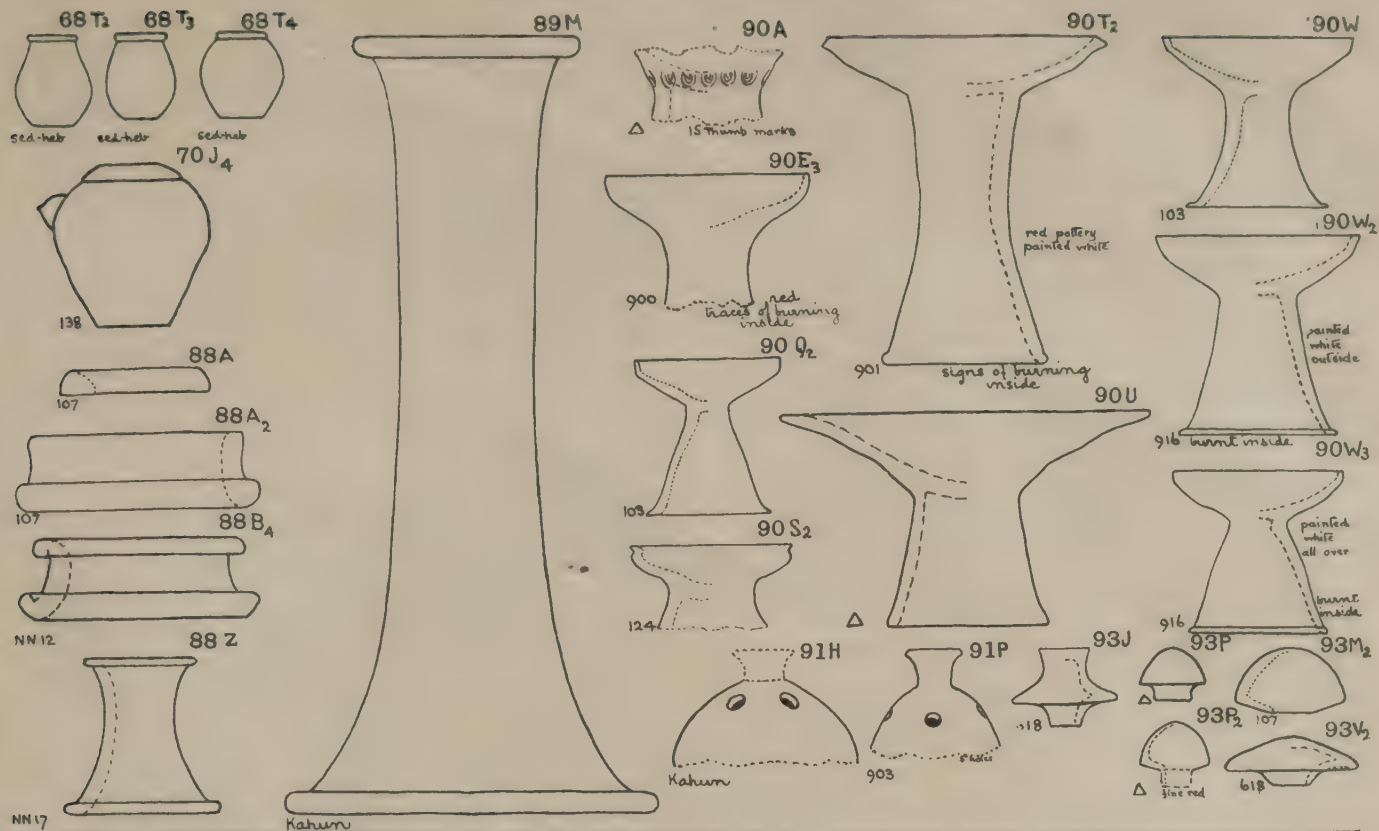
ALL POTTERY SCALE 1:8

W.M.B.

F.P.

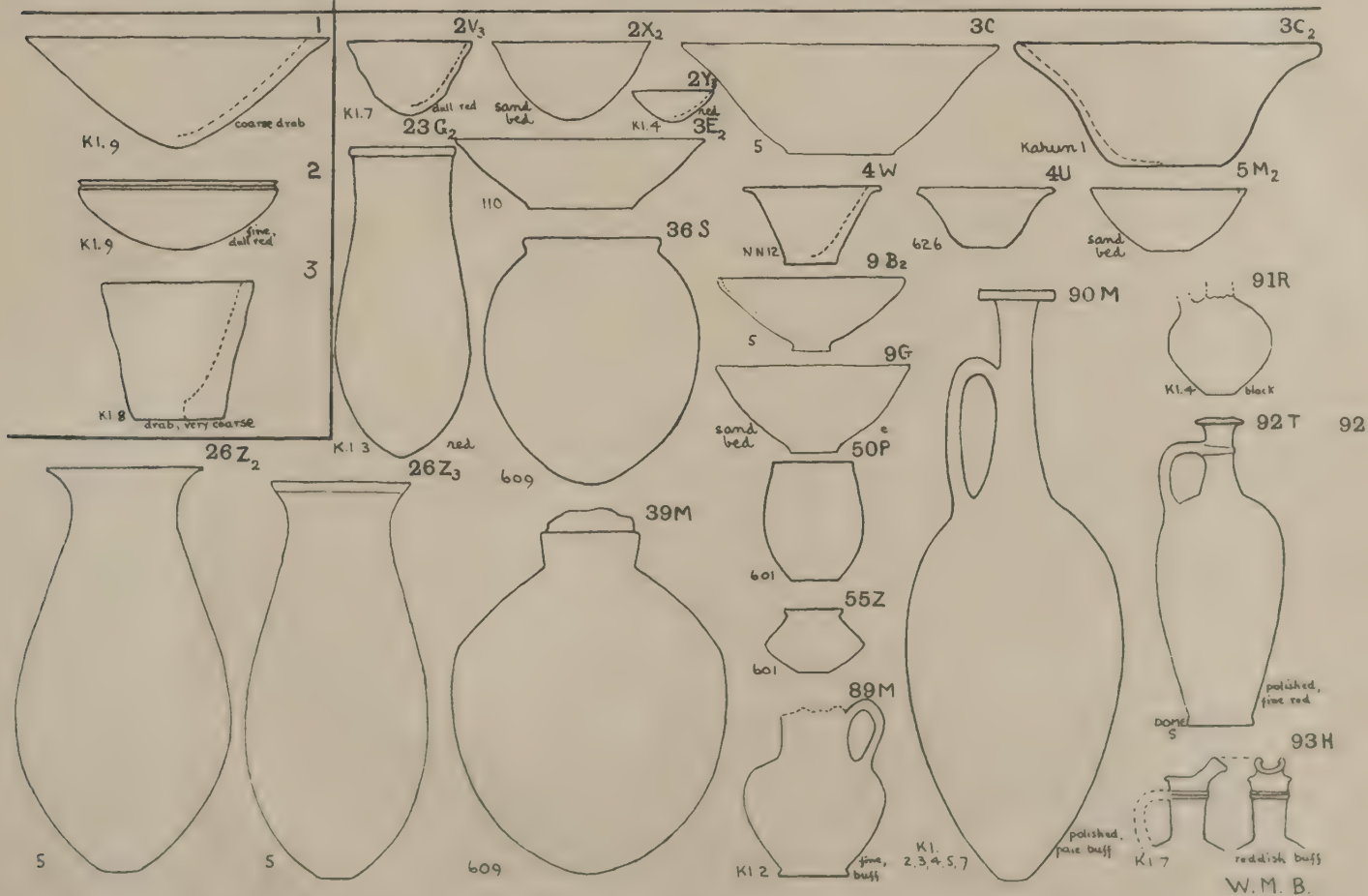






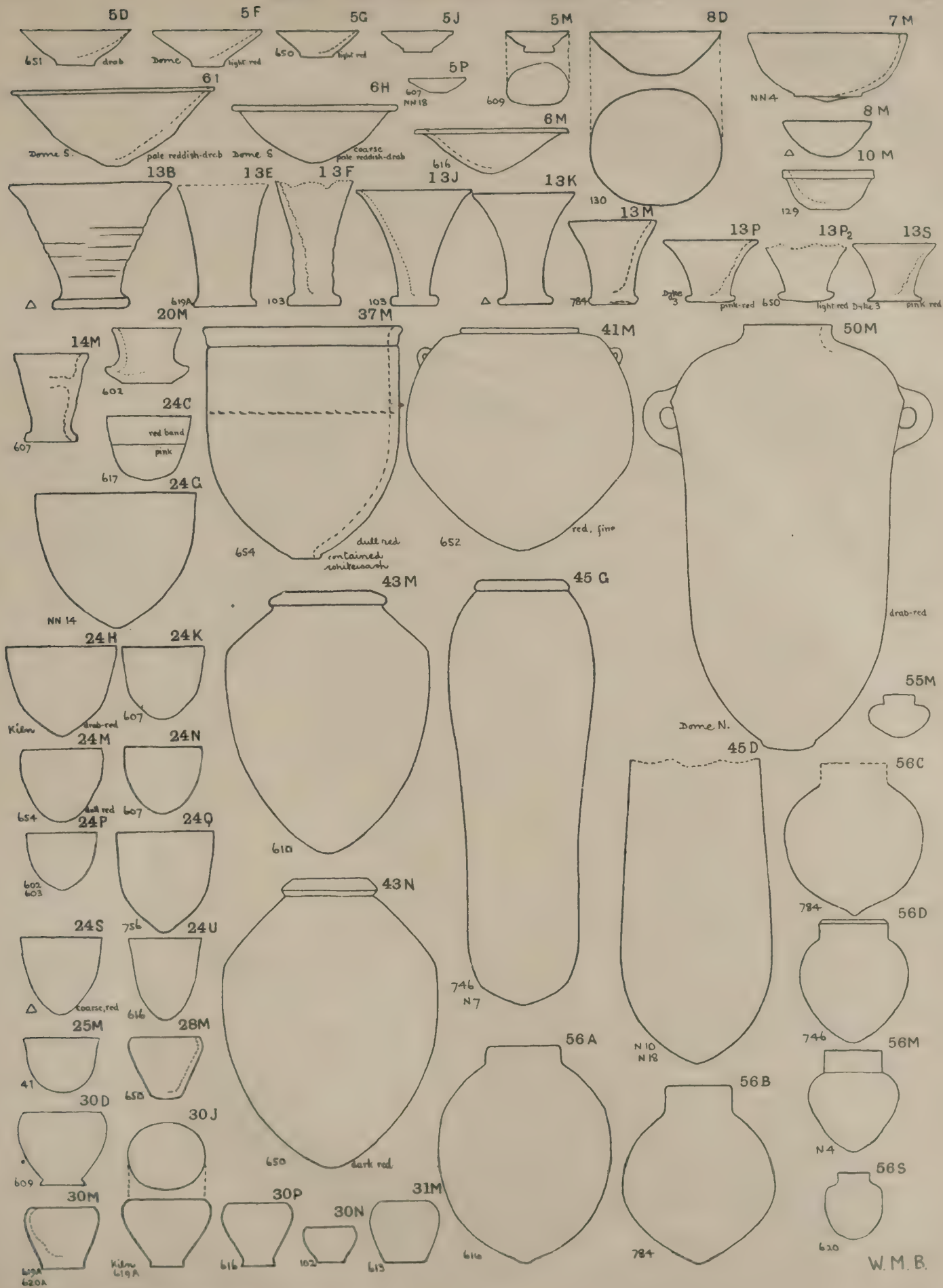
OLD KINGDOM

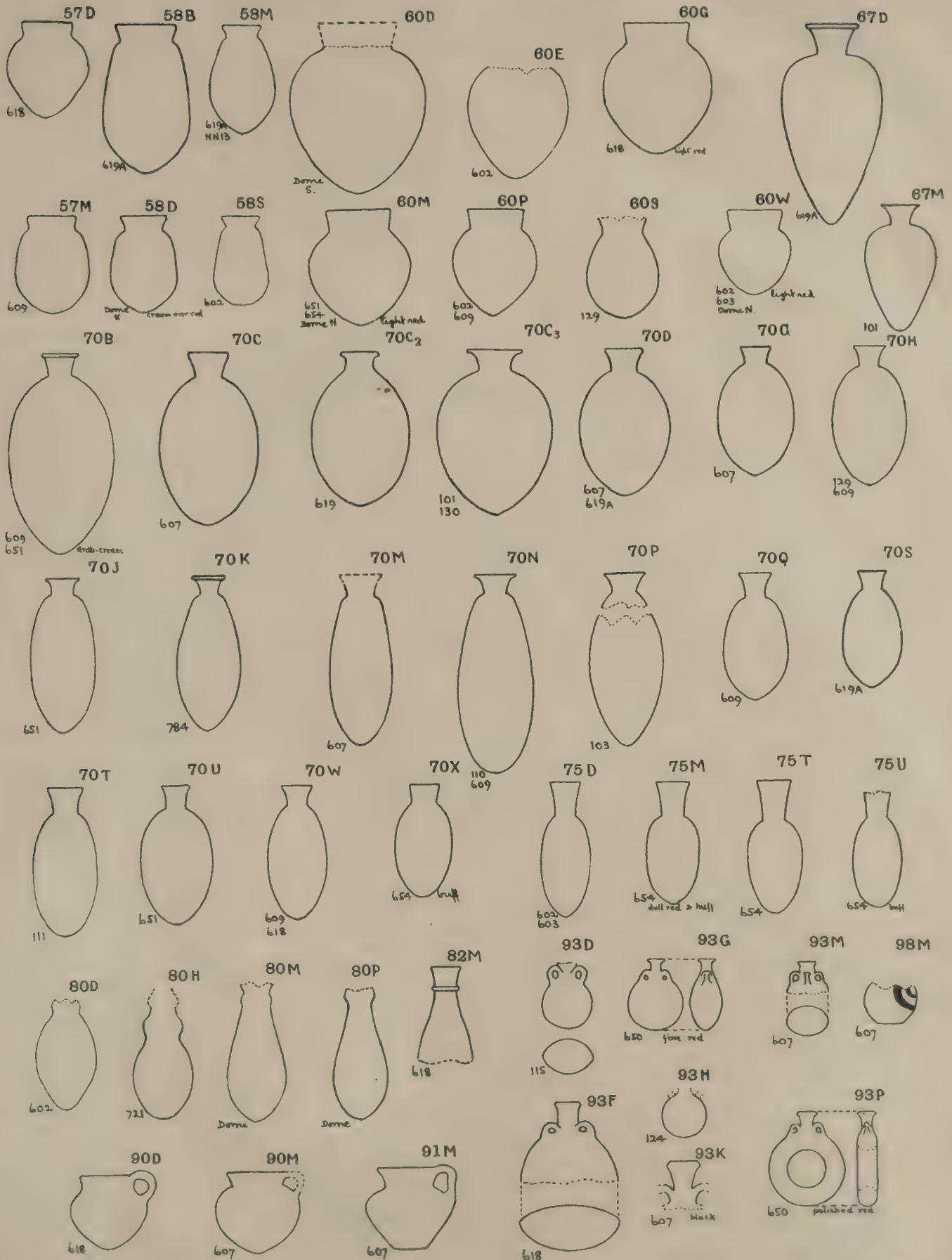
XVIII-XIX DYNASTY



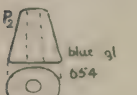
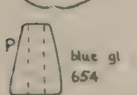
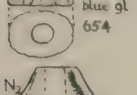
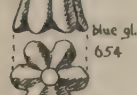
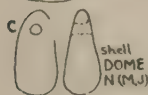
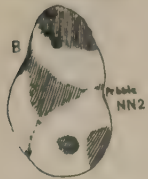
FOR TYPES xviii 91Q₂ 92MP SEE PLATE LV.

W. M. B.





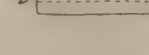
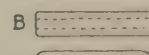
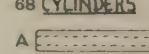
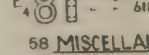
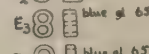
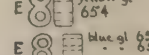
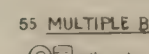
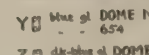
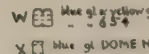
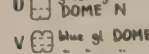
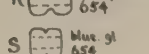
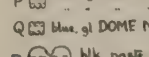
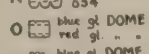
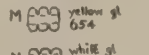
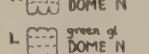
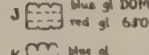
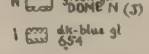
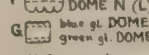
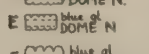
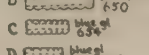
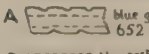
46 PENDANTS



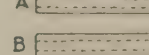
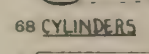
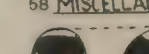
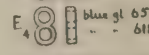
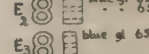
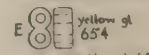
47 RIBBED BEADS



56 MULTIPLE BEADS



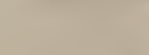
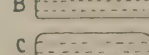
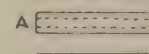
55 MULTIPLE BEADS (SPACERS)



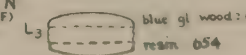
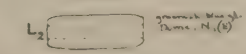
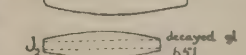
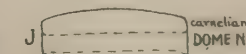
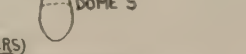
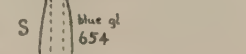
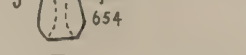
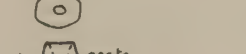
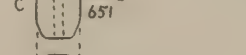
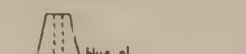
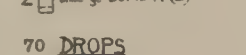
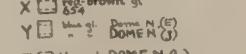
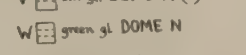
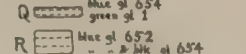
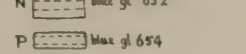
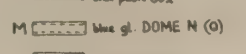
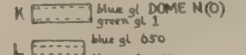
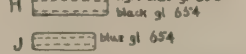
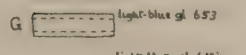
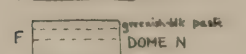
58 MISCELLANEOUS



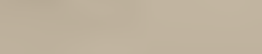
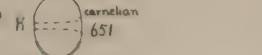
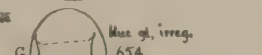
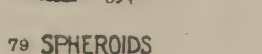
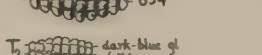
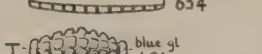
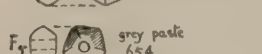
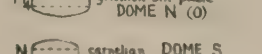
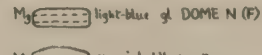
68 CYLINDERS



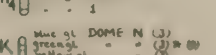
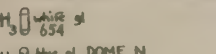
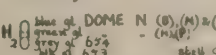
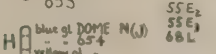
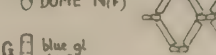
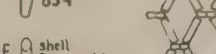
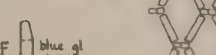
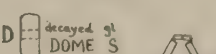
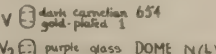
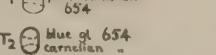
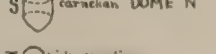
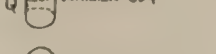
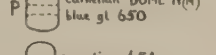
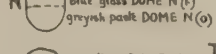
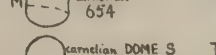
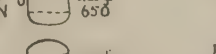
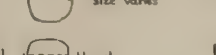
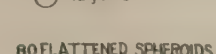
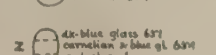
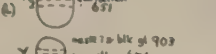
E 4x blue gl. irreg. 653



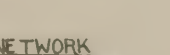
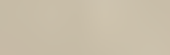
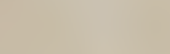
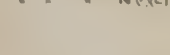
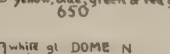
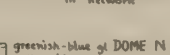
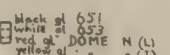
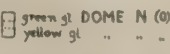
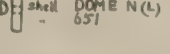
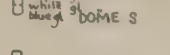
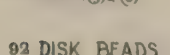
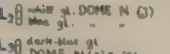
M varies from M to M2

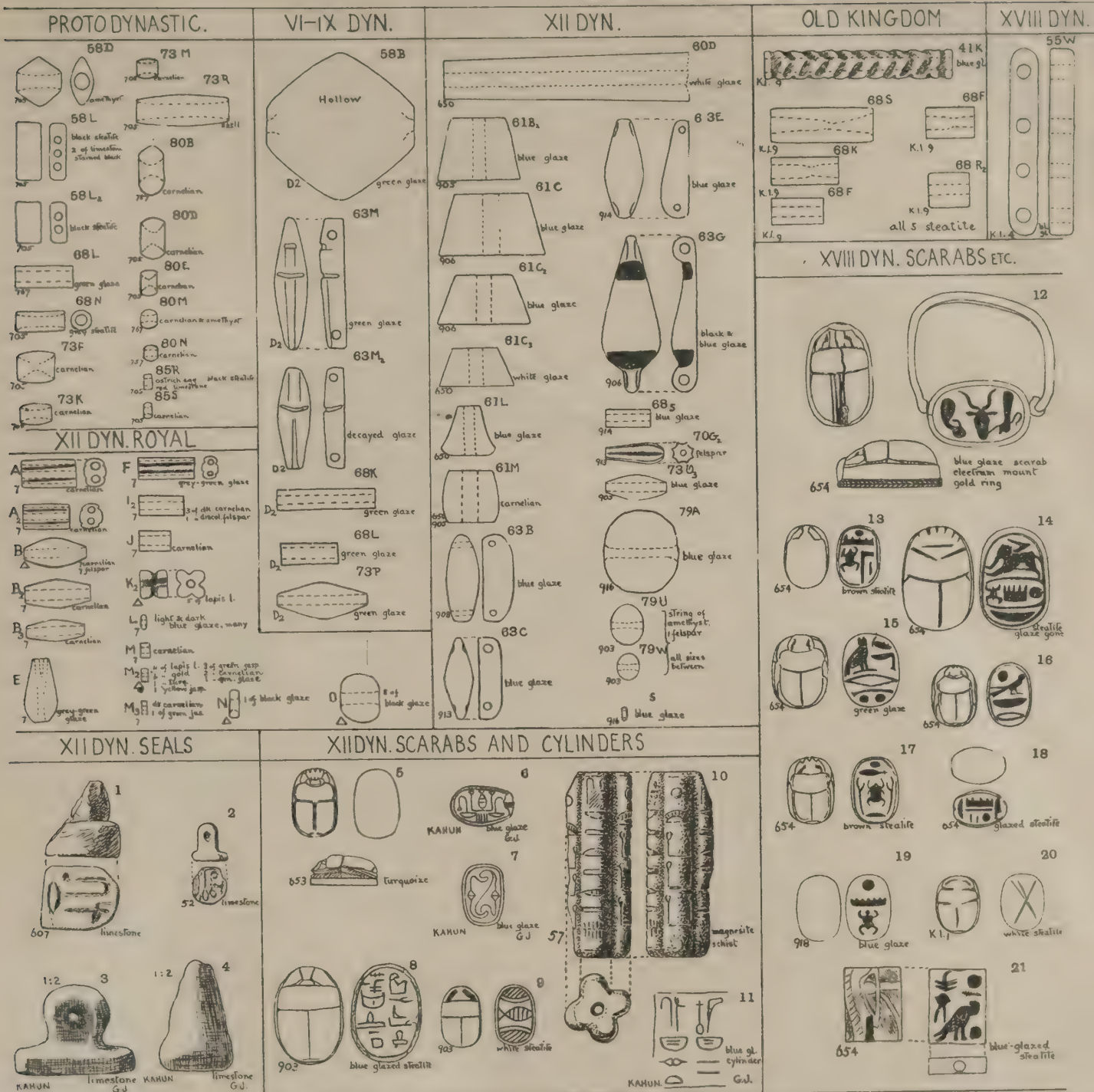


H 3x blue gl. 651

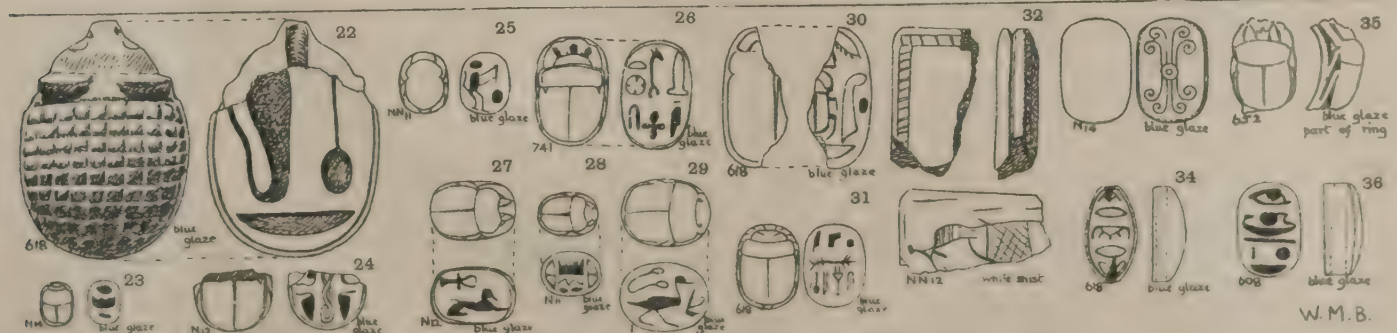


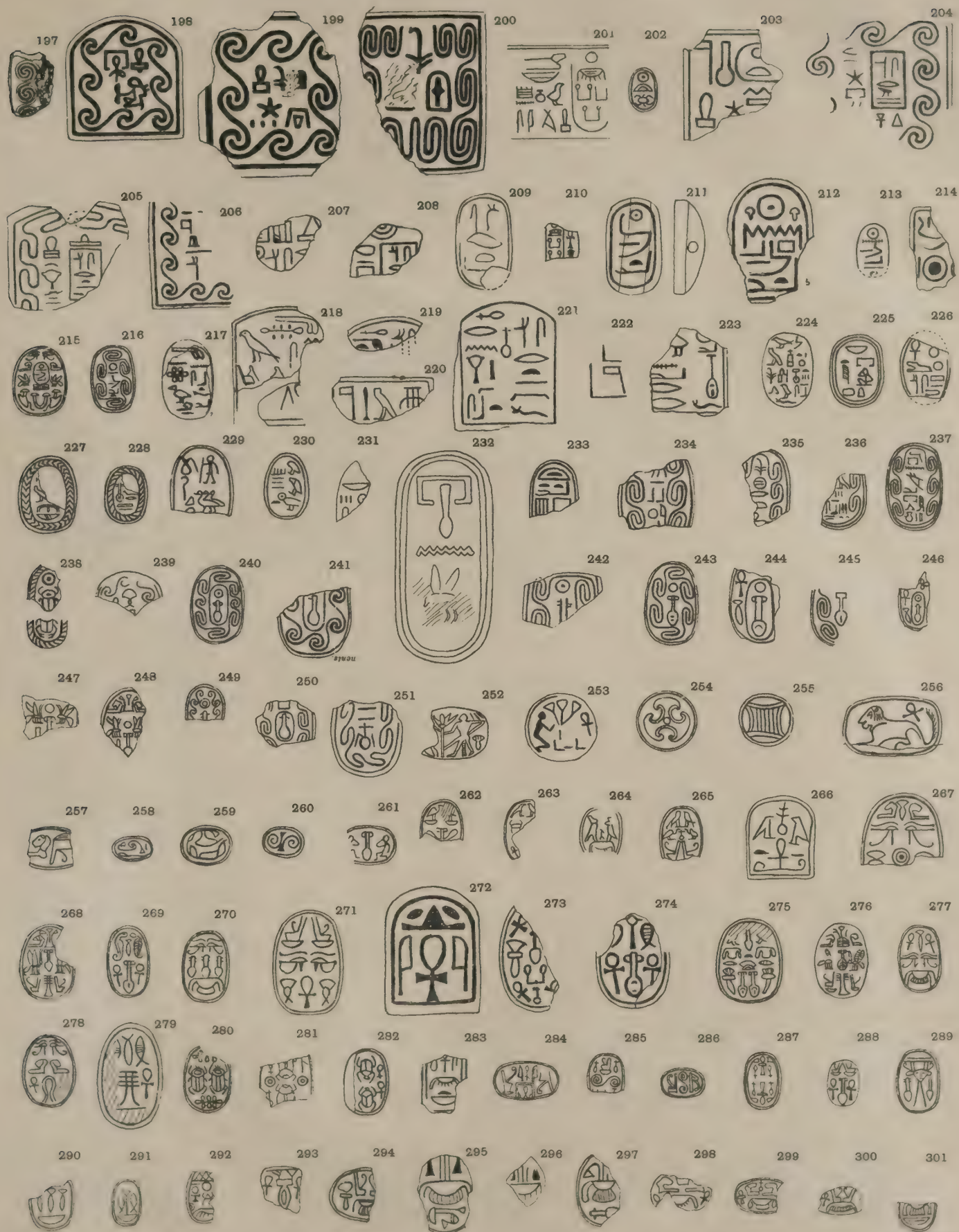
L 3x blue gl. DOME N (L)





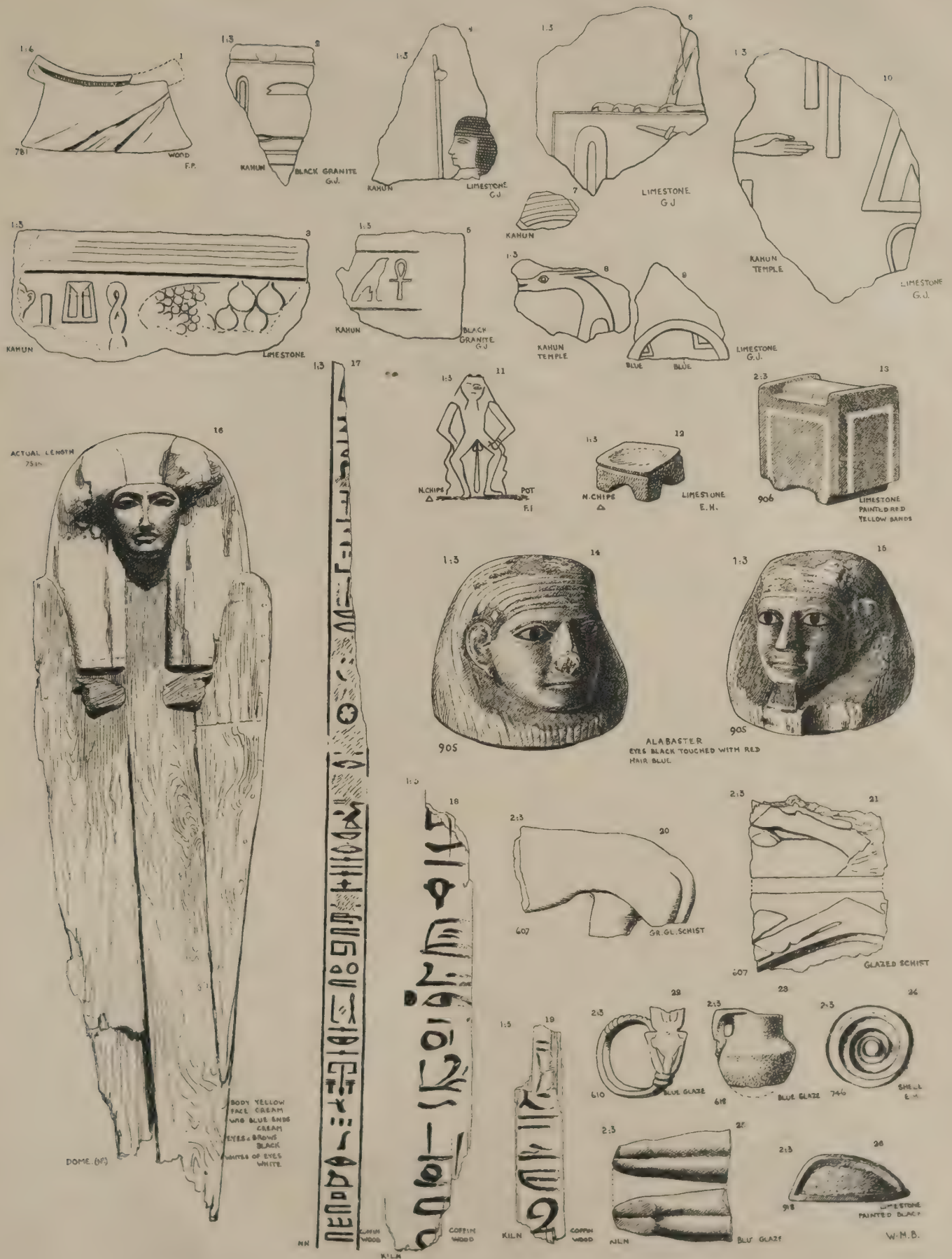
XXII-XXIV DYN. SCARABS ETC.













10753 b.

